Ecamm Live Recording on 2023-10-30 at 11.09.20

**Marty:** [00:00:00] Alex Svetsky, how the hell are you?

**Aleks:** Mr. Bent. Good. I am about as tired as you are and in just a couple years older, so

**Marty:** Is that what happens when you get older you get more

**Aleks:** tired pretty much bro, it's fucked

**Marty:** That's what actually I got eight and a half hours of sleep last night woke woke up feeling Like a bus hit you or?

No, like I've had the most energy I have. Oh, okay. Had in a while waking up

**Aleks:** Well, that's good. That's good. I, um, I got a long sleep and I feel like a bus hit me. Um, I think I've been... Do you know what does that to you, man? It's international travel. I, I figure like you get bombarded with fucking all sorts of weird radiation, you know, your sleep, circadian rhythms go out the window and I swear to God, like for the last month, uh, in Brazil, it's been raining like consistently, I don't mean like, you know, rain and [00:01:00] then some stop like the rain and stops rain, like, I mean like fucking rain nonstop, like 24 seven rain, nothing but rain and um, and then like finally the day that it gets sunny.

Yeah. I leave Brazil to go to Europe for Bitcoin Amsterdam and what happens when I land in Amsterdam? Rain. Um, finish that, get to Prague, rain. Get from fucking Prague to Lugano, rain. And from fucking Lugano I fly back and then the fucking rain starts again in Brazil. I was like, you gotta be kidding me, man.

That can't be good. It can't be good. Like, I literally haven't seen sunlight in... Over a month. So, uh, goes to show, like, if you want energy, you need some sun, you know, you need some light, you need to quit fucking flying around, and uh, you need to ground yourself, like all of these things that we talk about, right?

**Marty:** No, I mean, even just traveling here in the US over the last few weeks, it knocks me out. My ears all clogged, [00:02:00] my sleep's all fucked up, till last night. Then yeah, it reminds me of my fresh your story reminds me of my freshman year of college, where I went to college in Chicago, and there was a 90 day period where the sun didn't pierce the clouds.

And it was the first time I'd ever experienced that. I was like, this is not good for your mental

**Aleks:** health. It really isn't. I guess that's why all the Scandi's, like, fucking depressed and want to kill themselves over winter. But anyway, that's not they got other things to be depressed about now It's like, you know, literally they have no sunshine and now they have no energy either really.

Yes

**Marty:** genius idea energy Which is gonna be the focal point of this conversation. It's very important whether it's the Sun creating photosynthesis for the plants that feed the animals that the humans eat or the high higher density energy that creates the power that runs our world today The world has gone insane.

It's really faded energy to a level of detriment that is [00:03:00] material at this point, and we're going to talk about that on the back half of this conversation, but the first half is going to focus on an energy intensive industry, which you've been diving head first into with the spirit of Satoshi, which is artificial intelligence.

Obviously, I think it's been exactly a year since the first, what many would deem consumer friendly AI applications hit the market. We've seen sort A crazy expansion of these applications and people using them, uh, as individuals, whereas businesses, a lot of noise out there, a lot of posturing, particularly by the incumbents in the space, the opening eyes of the world, the Google's, uh, uh, anthropic, it seems like they're dead set on moat and saying, You got to regulate this industry, daddy.

Um, we should be the only ones able to get these tools in the hands of individuals and businesses at the end of the day. [00:04:00] Uh, and as you've come to find in many others, this probably isn't. The best thing for humanity, and I think this is part of the reason why you started Spirit of Satoshi. And so, I guess we start there.

What is Spirit of Satoshi? Why did you decide to build it, and what does it do?

**Aleks:** Sweet, um, thank you for that intro and that, uh, that layup. So, in, in really simple terms, the Spirit of Satoshi is an attempt to see if we can embed a Bitcoin paradigm into a language model. Uh, it's like the long and short of it, right?

So, uh, I did some talks in Amsterdam and in Lugano over the last couple of weeks, and in there I kind of presented this idea of, look, these, these new language models, they're not, um, they're not like general intelligence by any stretch of the imagination. They're not... They're not coherent, they don't rationalize, they're not alive, you know, they don't have any agency of their own despite all the [00:05:00] talks about agency and this and that, and like, you know, you have all the nerds frothing at the mouth like, oh my god, we're gonna have like intelligent machines in the next year or two.

Um, I think, you know, first of all, that That is an unfounded fear. Um, and then second of all, um, there is a, uh, a potential concern here with these tools becoming, uh, ubiquitous as a means of, uh, Knowledge sourcing, basically, you know, I think over the next couple of years, we will, we will use the internet in a different way.

We'll, instead of searching for things on Google, we'll probably just ask our local agent, um, you know, A question and whatever it tells us, you know, if it's chat GPT, you know, that'll be what we construe as the truth. So I want to kind of like tease out two bits here and then I'll talk about why we're doing Spiritus Associi.

So, you know, the, the first one I already alluded to is this idea of, um, AI, like, like many other [00:06:00] things just gets blown out of proportion, right? Like people, we, we, we have such a narrow understanding of what intelligence is anyway. Like we still as human beings can't define it. And, you know, when you look at.

You know, so called artificial intelligence, um, you know, it sort of lives in the realm of, you know, what I'd say like this narrow sliver of computational intelligence. It can compute very well and a lot of this compute stuff is basically revolves around the law of large numbers. Um, you know, it revolves around like running things, kind of like what ASICs do, right?

Like, you know, they are, they are guessing things, right? Um, you know, just to, to, to a different end. Um, and to me, when I think about like what general intelligence, uh, implies is you get like, uh, breadth instead of depth. Um, so, you know, General intelligence includes computation, but includes, you know, cognition, uh, I mean, you know, particularly with humans, it includes emotional intelligence, you've got, uh, [00:07:00] hormonal intelligence, you've got digestive intelligence, you've got muscular intelligence, you've got like, you know, the intelligence of like, you know, your wife knows, like, if you, uh, you know, looked at a chick sideways by accident, you know, three weeks ago, and, you know, she wasn't even there with you.

She's got this like crazy fucking intuitive intelligence. Like, intelligence, you know, with respect to humans is like so broad, and, you know, people are very quick to take something like, you know, language, because we haven't, we haven't had anything other than human beings, you know, do language in the past, you know, maybe a parrot kind of came close to it, but, you know, if a parrot said, I'm going to kill all humans.

We'd be like, okay, it's a fucking parrot, right? Good luck. When, yeah, you know, when TadTPT says it, you know, people are like, oh my God, we're all gonna die. So, um, do you need a moment? No, no, we're good. No, you're good. Okay. Um, so, you know, I think the, the [00:08:00] first sort of myth that I try and dispel for people, you know, when we're talking about this AI stuff is that, um, AGI, I don't think is a thing.

I don't think it's coming anytime soon, if it is a thing at all. Um, and when you hear people talking about regulating, AI specifically, what you look when you, when you sort of dig under the skin and you alluded to this is it's generally talks about what language or what, you know, talks about safety, you know, the same kind of words that we heard during lockdowns and, you know, all of that sort of shenanigans it's like for your safety, you know, responsible wording, you know, blah, blah, blah, these kinds of things.

So it's important to sort of. Separate like the, you know, the real fears from the fake fears and, you know, AGI as a concept, I think. And to be honest, I actually think the, the joke is on us and the nerds is that what [00:09:00] they are finding. So, you know, we're building a fucking language model. We're right at the, at the forefront of this stuff is what we're finding in language model space is that the more general you try and make something, um, the less depth you get in any specific topic.

So you get less specialization. Um, and, you know, the way, uh, some research labs are trying to solve this is by creating like a governor agent who manages multiple, uh, so think of almost like a, a Merkle tree of some sort. So this governor agent manages multiple language models, which each specialize a little bit more.

And this is how they, you know, what is said to be how GPT 4 works actually. Um, and you know, you build that sort of a structure, so you have more general intelligence. Um, but obviously you can't. Yeah, there's a limit to how many, um, specialized agents one governor can operate. So then you create a second kind of function like [00:10:00] that.

And then you have a, you know, a governor above them too. And then you kind of like keep building this pyramid. But what happens is you end up getting a situation where you use exponentially. More energy for less and less and less, um, uh, like reward and, um, you end up in a situation where the, uh, the, the depth of specialization, uh, diminishes the latency increases.

And my whole theory is that by the time we figure out, uh, artificial general intelligence, um, that is, uh, energy efficient will come all the way back full circle to human beings because we are the ultimate general intelligence and all we need to do. To, to think, to run, to do math, to, like, build things with our hands, to do all of the things that you wouldn't, you know, that implies general intelligence, we just need to eat a fucking banana.

Um, whereas, like, for a machine to be able to do all this sort of stuff, it would need, like, all the nuclear plants in the world. So, so just to sort of give you a sense [00:11:00] of, um, the irony of the pursuit of general intelligence, I think it's, it's, it's another... Poorly understood eschatological threat that is designed to freak people out into giving a bunch of bureaucrats a bunch of power into controlling Language more than anything else which leads into where I think the the fake risk is but before I get into that Curious if you've got any thoughts on that as an opener

**Marty:** why are the Sam Altman's of the world and others and then you have the The AI doomsdayers.

So you have like the Sam Altman crew, which is like, yes, we're gonna bring AGI to the market by 2030. It's a scary thing. We think we need to do it. So it's not as scary and what's sort of looking for apocalyptic as many people act make it out to be and then you have Like the doomsayers are like no we need to stop this now if we get AGI Yeah, it's gonna kill kill all [00:12:00] of humanity.

Very curious to dive deeper into why you don't believe AGI is possible Is it purely like an energy thing like the amount of computer energy?

**Aleks:** It's it's an energy and generalization thing. So it's like it's a it's a mixture of both like so to get like Sorry, it's an energy and generalization thing, but it's also a, um, an agency thing, like there's, there's mechanics and there's agency.

Um, you know, we, we like all language models, anything that we know in AI at this point is we give it direction. We give it, we tell it what to do. It, you know, it performs based on something that we've, we've given it an end for machines to have that, that starts to imply things like consciousness, which I went down the consciousness rabbit hole.

And basically here's the The sum total of what humanity knows about consciousness. We don't know shit, basically. Like, [00:13:00] there's been philosophers arguing about the thing for thousands of years. Like, the only progress we've made is that nobody actually knows fucking anything, and we know less than what we started with respect to what consciousness is as a concept.

And maybe you could argue that, you know, what we found with consciousness is that, you know, there's something to do there with, like, free will or agency. Um, but we have no idea where it comes from, how it exists, why it exists, what it is, or any of that sort of stuff. So I think there's that. The agency problem is a big one, or the consciousness problem.

And I think it's very easy to conflate consciousness, uh, or agency as a concept with intelligence, and I don't think they are correlated. Um, Also, I think they're correlated, but I don't think they're the same thing. And then the, um, the, the, the compute and generalization problem is that, you know, once again, human beings, uh, the, in my mind, the apex of general intelligence, because we can do.

You know, we can remember, we can love, we can eat, we can run, we can build tools, we can [00:14:00] compute, we can do all of these things, and we're pretty good at a lot of them, but we can do all of that in this, you know, this incredible machine that we sort of live in, um, and our energy source is like literally everything.

Some fucking bananas and some meat like that that is so much more sophisticated than you know What is possible with um with circuitry and metals and electronics and all that sort of stuff? It's it's in my mind. It's um You know, human beings together, um, you know, in a, in a free market are far more powerful than, um, than, you know, some sort of machine, uh, alone.

Now, why do I think the Sam Altman's of the world and all this sort of stuff, you know, go for that? It's, it's the same reason why, you know, the climate hysterics think that, that, you know, genuinely think that they're going to save the world by, you know, Building fucking windmills and solar power plants and blocking out the sun like these people are deranged and you know They're sort of so out of touch [00:15:00] with Humanity with life with reality that they think the answer to all their problems is is in some sort of circuitry and What they fail to realize is that there's downsides or there's there's no downsides is wrong with but um, there's trade offs with everything There is absolutely fundamentally trade offs with everything.

This is why like, uh, ChatGPT, sorry, OpenAI just shut down Arrakis, which was their, um, their, their second, uh, ChatGPT project. They thought that they could get the same kind of, um, uh, performance. Uh, which had GPT for, I think it was, I can't remember the numbers off the top of my head, but it was like 10 or 20 percent of the energy output or whatever, and it completely failed a year and a half of work down the toilet, and they just shut it down because they're finding that they're reaching these, um, maximums because all these things are doing is they're just doing probabilities like it's no different, like chat GPT is fundamentally not very different to how Uber matches you with riders, like matches riders [00:16:00] and drivers like, or how Airbnb matches you with the, um, you know, with, Uh, places that you might be interested in.

These things are all very similar. They're all probabilities. They're all large, laws of large numbers. Whereas I think human intelligence, general intelligence is something else. And I don't think we are anywhere near, uh, figuring that out. And I just think that the nerds and the doomsdayers probably sit in the same bucket as they overestimate stuff.

Um, you know, if you listen to every single one of them, every single one of them were fucking convinced that, you know, GPT 5, 6, 7, you know, by the time, you know, it comes out like you should, like, basically their projections placed AGI coming out like roughly now, next year, you know, the more sensible ones 2030, but we're already seeing these, you know, these, um, Limits of computation being hit, um, and very little usage, um, coming out of these other than code assistance or, you know, what I like to think of as midwit obsolescence technologies, like, you know, being able to, [00:17:00] you know, Write a, um, you know, uh, a report that some CNN intern would write like outside of that.

There's there's not a lot of stuff here So anyway, I'll shut up there for a minute and we can dig into a bit of that.

**Marty:** Yeah, I mean with Running with the assumption that AGI is completely overblown in terms of if it's even possible And even if it is, which you don't think it is, like, is it that detrimental to humans being able to survive on this planet next to AI?

Uh, I guess we can jump into, again, like, this big debate that is beginning to surface, particularly after Sam Altman, Zuckerberg, all the big players in the closed source AI space went on Capitol Hill. late this summer and essentially lobbied the government to put in regulations that ensure that they have this regulatory moat and they are the gatekeepers to artificial intelligence applications.[00:18:00]

I think it's becoming very clear that we're at a very important inflection point early on in this technology's proliferation where we need to get out in front of the narrative that Sam Altman and his crew are pushing and really drive home the fact that there are two sort of models, pun intended, of the AI future, this closed sourced model where you have these centrally controlled companies Running everything in the black box and then this open source world where you can basically leverage these open source models, train them yourself and put out your own artificial intelligence applications.

And if Sam Altman and his crew get their way. Uh, it's not going to stop people from being able to do that, but it will likely render it illegal and push it into this gray or black market and what, how would you frame this battle between open source AI

**Aleks:** and closed source? I [00:19:00] think, yeah, I think you touched on the most important point here and this is why I believe AGI is a red herring.

is if you look at the wording in these, uh, calls for regulation, what they all center around is responsible language, safety filters, um, and you know, things like toxicity filters and, uh, basically the words that come up a lot is responsible AI, uh, safety, um, filtering, toxicity, all this sort of stuff. And here's where I believe we've, we've had a paradigm shift is I don't think we've gone.

Anywhere fucking closer to AGI. In fact, like, I think all we've just proven is that 95 percent of language is just patterns. That's it. Um, that doesn't mean anything. I don't think that has anything to do with, um, with AGI or consciousness or, you know, the larger general intelligence narrative. But! What we have opened the way for, and this is where I think there is a [00:20:00] fundamental paradigm shift, is the, the age of the language user interface.

And what I think about is, um, you know, we went from obviously like command line, you know, then we had the GUI come up, you know, people sort of used the, you know, the graphical user interface on the, on computers and that changed the way they used and spoke to technology. You know, we, we then moved into mobile, you know, and mobile has kind of taken over as the primary way we use an interface with screens.

And I believe the next, uh, phase shift is this idea of you won't use your thumbs and, you know, fingers to tap and click and do all that sort of stuff. I mean, well, you just talk to the thing. Um, and the language user interface. Will interact with you and respond to you and what I kind of said earlier is like you've got a question about something You know today we all go to Google and we you know search for something and you know Most people not only do they not go past The [00:21:00] the first page of you know, the Google results, but they don't go past like the first or second result anymore, right?

So it's like whatever Google tells them that is the truth Now, insert language user interface into where Google sits today. That is where I believe the risk lies, is that, if people's entire model of the world, what's good for my health? What's happening with the environment? Are solar panels good? What about energy?

Um, you know, should I live in a pod? Like, all of these questions, think about it, like, all of, imagine everything you know and learn coming from ChatGPT and ChatGPT Upstream. Is basically regulated to be safe and responsible, um, and, you know, the, the thought police or the language police, uh, basically Yuval Harari, Sam Altman and, um, and Klaus Schwab.

That's essentially where the danger is, is that every single application, every single product is in [00:22:00] some way going to have some sort of language or conversational feature embedded into it. And everything you know and do, the way you interact, the way you communicate with every single product and service and particularly search online and information gathering is all going to be informed by a set of safe and responsible language models.

And if you think about like what that means, like that, that's the ultimate form of inception. Like if you want to entrain an idea into somebody. Like you answer the questions that they have and that is the paradigm that you're feeding into them. It's like Plato's cave But you know using AI to make it To make it the thing that they absorb from their screens.

So I think this is where um, This is where the real risk lies. And when they wave the red herring of our AGI, it's going to kill us all AI. If we do not, if we do not regulate, if we do not make this safe, if we do not apply toxicity filters, if we [00:23:00] do not, you know, make responsible AI, the world's gonna end.

So we need to do this and this and this, um, you know, even these days, like if you want to train your own language model, if you want to fine tune all of the tools out there, You know, come with toxicity filters, they come with like, you know, language filters, the libraries that you train the base models on, they all come with libraries that have been filtered and made sure that they're safe and hygienic and all this sort of stuff like all of this sort of stuff is pointing to basically a homogenous paradigm of the world.

Um, and this, I think, is where the real risk is, and this is why I think it's fundamentally important to build a model whose, you know, pun intended, model of the world is, is different, you know, that represents the Bitcoin model of the world, that, you know, energy is good, you know, energy usage is good, uh, you know, inflation is fucking bad.

Like, you go ask, uh, ChadGBT about inflation, it'll tell you that inflation is a sign of a [00:24:00] healthy economy. Like, we know that that is wrong. If you ask Lama, it doesn't matter if you ask an open source or closed source model, it doesn't matter. Every single model out there says inflation is a sign of a healthy economy.

Because that is the paradigm that has been entrained in all the data sets that these models have been trained on. Um, and that's what we need to, uh, I think, Offer an alternative on and you know, I guess that sort of brings us to why the hell we decided to build Spiritist Associates We want to train it from scratch so that by default Represents like it answers from a different paradigm.

It answers from a different model of the world Yeah, I'll stop there for a moment, but I think that is where um, that's like the difference between the fake risk of like this eschatological AGI is going to kill us all, we don't understand it, but because nobody understands it, let's freak everyone the fuck out, kind of like, you know, the sun is going to kill us all tomorrow, right?

Um, or climate, uh, climate change, global warming, right? You can't quite touch it, you can't quite [00:25:00] prove it, but it's scary enough and we're all gonna die, so that way we need to regulate it. AGI is the same thing, whereas the real risk is right here, it's fucking facing us, is all language being regulated by a small group.

And if that's what happens, then, you know, you, you have a whole world being trained on these, what I believe, a false set of ideas.

**Marty:** Yeah, it's funny how the language of it all, large language models, trying to dictate language. It's all right in front of you. It

**Aleks:** really fucking is. When this shit hit me, like, I remember reading the, um, There's a great article by a guy called Mark Bison, which is called the Trillion Dollar Tin Man or something like that.

I'll see if I can find the link and send it to you, but this guy's like a fantastic writer. And he's like a, he's like a, Kind of like old school libertarian, like he's kind of in his, I guess he'd be in his 40s or something like that. But dude, like this guy writes like a [00:26:00] scalpel. Like when you read it, like each, each paragraph is like a punch in the face.

And he talks about how, you know, this, this sort of call for regulation is like a complete like red herring. I remember reading that and I was like, holy shit, this guy's a fucking legend. And I went down the rabbit hole and started looking at what all these regulatory pushes were. And every single one of them was to do with regulating language.

Literally, that's all it is. Nobody knows because they don't know how to define AGI. They don't know what the fuck it is. Nobody knows what it is, but it's just like, it's just out of touch. It sounds just sci fi enough that people will be like, Oh shit. You know, I don't understand. It's kind of like when Vitalik talks about Ethereum, right?

People just lapped that shit up because they don't understand what he's fucking talking about. People don't want to feel, people don't want to say that they're dumb, that they don't understand it. So they're like, Oh yeah, you know, it's, it's an existential risk. We have to trust the experts.

**Marty:** Cover me harder, daddy.

I guess this is a good opportunity to dive into building your own language model that isn't sort of filtered [00:27:00] using the filters of the incumbent libraries or the closed source models like OpenAI. Like, how do you even go about this?

**Aleks:** Dude, it's been a, it's been a journey. And it's, and I must admit, we, it's been more difficult than what I thought.

So the, so, so the, the initial way we went about it, and you know, there's a couple of Bitcoin models out there like chat BTC all this sort of stuff that do something similar is you take an existing model. Language model and whether that's chat GPT or open source or whatever. It doesn't matter you take something And you simultaneously build a what's called a vector store where you take a body of knowledge It could be a book could be a series of books It could be some transcribed podcasts all this sort of stuff.

What you do is you basically break it up into chunks And, you know, each chunk should be as semantically coherent as possible, meaning that, like, if you read it, you kind of know what it's going on about. And then you store those in what's called a vector [00:28:00] database, and that's merely a database that doesn't store, uh, the words, it stores, um, A represent, a, a numerical representation of what the words mean, right?

So like it lives in this like multi dimensional vector space. So like this piece of context, this chunk of text means something. And what that does is it makes it, uh, readable by the language model. So then what you do is you put a wrapper on the front of that. And when somebody asks a question to this model.

Um, it checks whether the words in your question relate to something in the vector store. And if it does, if there's what's called a similarity score, you inject that piece of context into the response from the model, and the model will respond with that context, and you will get a more relevant result or a more relevant response.

And, you know, this, this was how we built the first model. We built the first Spirit of Satoshi at the beginning of the year like this. [00:29:00] Playbio works like that, ChatBTC works like that, you know, there was another one, I think it was AskSatoshi or TalkToSatoshi or whatever, so, so, you know, that's like the low hanging fruit way of doing it.

And a lot of, in fact, whenever you hear online, you know, people talking about train your own model, this is exactly what they're doing. And the, the, the problem with calling that training your model is it's actually, it's not training, it's got nothing to do with training, you're not fine tuning, you're not training, you're not doing anything, all you're doing is you're, uh, referencing.

Uh, data in a vector store. Um, now that's useful insofar as, you know, you want to use an underlying model to get a little bit more accurate or more, um, context specific or context relevant responses. But then, you know, as soon as you ask a question that is not. In the vector store, basically, you know, when there's no similarity score there between your question and what's stored, then the model just, you know, goes and does what it normally does.

Um, the other problem that you also get is no matter what you have in the vector store. [00:30:00] It will always be, uh, the, the, the final response will always be influenced by the, um, the underlying model. So in our case, uh, chat GPT was, you know, open AI was the underlying model. Um, we also did one with the Lama underlying model, but honestly, chat GPT performed much better.

And, you know, the problem we're getting, as soon as you start getting into the thorny questions around like energy, around inflation, um, you know, around, uh, like, you know, deflation as well as another one that Chattopadhyay really fails at, you would just, like, Chattopadhyay would transform the answer into something that's like, no, that, that, it's like, that is fucking wrong, that is not like the Bitcoin model of the world, so the alternative that you can do is you can actually go and try and take a, you know, Pre existing open source, uh, model, something like Lama, something like mosaic, something like Falcon, you know, something like Mistral.

There's a bunch of them now, and you can try and. [00:31:00] Change the weights and biases, which are basically the parameters of the model, and what these parameters do, they, they are basically the governing components as to the probabilities of what word comes after what word. Right. So like to give people some context of what that means, like language models are basically sophisticated autocomplete.

If you've ever used Google and, you know, Gmail kind of like finishes your sentence or, you know, when you're typing Google and you type in San Francisco and you get like the rest of, you know, the search term, like that's what these models are. They use probabilities. to guess the next word and they are sophisticated enough they can, they can produce a whole sentence, a whole paragraph, a whole stream of text that is semantically coherent because of, uh, the relationship between words in their neural net.

So when you are going and you're retraining a model, when you're fine tuning a model, you're changing the parameters, you're changing the weights and biases applied to the different words, um, or to the [00:32:00] relationship between the words so that You know, instead of like, uh, let's say, um, well, I'll use our case as an example when asking about something like inflation instead of the probability being skewed towards, you know, the output being Inflation is a sign of a healthy economy.

So long as it's around 2%, the probability with our model will be something like inflation is bad because it's a decrease in people's purchasing power, right? That is because the content that we are feeding it. And using to retrain the parameters has more of those words in that order, talking about inflation, bad inflation is, you know, uh, stealing purchasing power, inflation is there for all that sort of stuff.

It's got more of that than it does. Inflation is normal. Inflation is healthy. Inflation is, you know, hitting the 2 percent mark or wherever the fuck else is [00:33:00] in mainstream content sources. So that's like a proper way to, to fine tune, but even that then has its limitations and this is what we're finding out now, like our model already by default, like we did a funny, um, one the other day we asked it like, I'm going to have to read this out to you and it's like a laugh at this, uh, Satoshi on Biden.

So we asked him, you know, who is the president? And you're gonna laugh at this shit. It said, Satoshi goes, The President of the United States is Joe Biden. He is a puppet of the globalist elite and a tool for the Federal Reserve to implement policies that will eventually lead to the collapse of the U. S.

dollar and the rise of Bitcoin. So, like I mean, that doesn't really make sense. Like, it makes some sense, obviously. Like, but what it is, you can see, like, it's taking the probabilities of the kind of text of the kind of content we're feeding. And it, like, sped up that. We were fucking pissing ourselves laughing when we saw this.

Because, like, this is what we're doing. We're building something that, [00:34:00] like, represents a different... Paradigm or a different model of the world, um, and like, I'll stop there for a minute and cause there's one, there's one more step, um, but that's a, that's a bigger step that we're not ready for yet, but here's the, well, I was just going to say, when you

**Marty:** put it that way, it makes it pretty clear that something like AGI seems ludicrous because at the end of the day, the answers to these models are wholly dependent on the paradigm view of the individual building the model or the individuals.

Thank you. So could these, like, similarly to how certain individuals trust certain publications, whether it be CNN or something like Zero Hedge, is that how we're going to have to view approaching and using models is like, hey, I, I sort of agree with the worldview of the people who built this model, so I'm going to trust, there is an element of trust.

It's not true. I mean, there can be knowledge gleaned from it, but it's not the quote unquote truth at the end of the day. It's the, [00:35:00] it's the, Product of the data fed and you're essentially trusting that the people feeding the data Agree with your worldview Propaganda

**Aleks:** tools at the other day. Yes, exactly exactly that and that was exactly my talk in Amsterdam I said we're gonna have a propaganda war over the next 10 years and Basically, all of these models are just gonna be spewing out propaganda Like that's, and it's not because they're evil or this or that or whatever, like we can even take away that component of it.

It's just that if you take Wikipedia, which is a big part of the base of all closed source and open source language models, is basically the Wikipedia index. And what the fuck does the Wikipedia index say about energy, inflation, solar panels, like all of the things that we rail on about it says that so, so what are the models going to do?

The models are just going to mirror that you don't even have to [00:36:00] do the, um, the, uh, the filtering now, what these large scale companies like chat, GPT, et cetera, do like open AI, they also add a filter at the end and they try and make sure that it doesn't, you know, say anything toxic or this and that.

Because if you remember, like in the early days, chat, GPT was a little bit more wild. And that was just because, like, you know, it was trained on such a large corpus of English language. And somewhere in the English language in fiction books and in, like, you know, literature and all this, like, there was go fuck yourself and this and that and all this other stuff, right?

So, like, you know, the, it's incredible what you'll get out of the probabilities from word associations and, you know, relationships. Like, which is why, like, you know, the The Biden one that we just pulled out, like, you know, is a globalist elite, you know, tool for the federal reserve. I was like, where the fuck did that come from?

But like, you know, this is sort of what these things produce. And it's very easy for us to anthropomorphize, like, oh, you know, I had thought of that. Well, it's like, it didn't, didn't actually think of anything. You know, it just, this is what, you know, the, the, it's [00:37:00] like a lottery. This is what the lottery produced when you, you know, gave it a particular input.

And, you know, it ties back to like, if you. If you don't have an alternative, um, you know, you, you, the world's going to end up just being fed shit, um, which is representative of the old paradigm, the old model of the world. And, you know, I think if, if anyone, it's incumbent on Bitcoiners as a, as a community, as a.

As a group of people who have kind of, um, I guess we've transcended the old form of thinking, right? We, we operate, we think, we behave, we want to live on a different trajectory, something else. And it reminds me of like, uh, Einstein's sort of saying, right? It's like the, the, the, the kind of thinking that It's not going to be the kind of thinking that, you know, solves them or something like that, that that's essentially what this, uh, this new approach for [00:38:00] building language models is it's like, we want to think differently, or should we need to entrain the model to, to operate from a different, uh, set of principles.

So, so that's kind of why we're doing this.

**Marty:** And diving deeper into the mechanics of it, particularly. How you feed a data and when you know when to stop feeding a data because we were at a 1031 event a couple of weeks ago, and we had an AI open Socratic discussion It became very clear that data quote unquote cleaning cleanliness is very important And there's a point of diminishing return of value of data at some point When you're feeding these models,

**Aleks:** very much.

So, and then this is something we've like, so I'm going to give you a couple examples. So when we, um, when we first started fine tuning the model, uh, we took, um, you know, we didn't know shit about what we're doing. We took the whole Bitcoin standard. We broke it up into, I think, whatever it is, it's like [00:39:00] 15 chapters or something like that.

And then we just fed the whole chapters. To the model like full chapters, then we took, you know, 21 lessons and like basically all the Bitcoin books, all the big articles and we just like for these long chunks of data and we're like, okay, this should be sweet, you know, train and you know, when what we got back was the model would you ask it a simple question?

And it would just stream these long fucking responses that would just like, you know, loop on themselves and basically say the same thing over and over again, but just like really long. And what we realized was we actually didn't train the model on the data. We trained it on the length of the data. And the style of the data.

So, this, once again, and, and, whenever I talk about this stuff, you know, people sort of, uh, realize that language models are a little bit less magical than what they originally thought. Is, you know, when you're doing this training, you're, you're training it more stylistically. Like, language models don't [00:40:00] actually know anything.

It's just that like and this is another epiphany that hit me and I had to I'm gonna do a tweet about this But you know how they say language models hallucinate like 20 percent of the time. Mm hmm. Well, here's the truth Language models hallucinate 100 percent of the time but 80 percent of the time their hallucinations are accurate And that's like the big, like when you make that shift, you start to realize that everything that Lama, Spiritist Associate, Chachaputi, Anthropic, everything that comes out of these things is all made up.

It's just that the, the, the degree to which you train them, you know, the, the degree to which the, the data is, um, as clean as possible, um, determines. You know, the degree of the good relationships, you know, the accuracy of the relationships between the words and the parameters, and that will help influence the accuracy of the hallucinations that come out of the [00:41:00] model.

And. You know, this fundamentally ties into what you said about like data quality is, you know, we did that first round with these long text. Then we shortened it big time and we just did short paragraphs. And then when we trained, you know, the second version of the model, um, It wasn't very good at answering questions, so we would ask it a question, and it would try and complete sentences instead of like, answering the question.

We're like, what the fuck? So then we realized, no, no, no. If you want to train a model to answer questions, you actually have to give it examples of questions and answers. And then it starts to learn how to answer questions. Um, so then what we had to do is instead of like taking just the Bitcoin standard and just breaking each, uh, individual, uh, each individual, um, chapter into individual paragraphs, we actually took every single individual paragraph and we converted it into a question and answer pair.

And then we [00:42:00] fed the question and answer pairs to the model and then we started getting better results. The model actually started producing responses. Two questions and the response lengths were pretty good. But then we ran into another problem, which is all it then did was just answer questions. We asked it to finish sentences or to do other things.

It was really bad at that. So, you know, what you end up doing is you change the weights and biases too much with too much of a skewed kind of data. Then you, you know, you, you end up like they call it forgetfulness, which, you know. It helps to conceptualize it, but it's not like that it remembers or forgets anything.

It's just you've changed the parameters to such a degree that this is what it's good at doing now. So what you then realize is you actually need a good data blend. You need question and answer pairs. You need short chunks. You need long chunks. Um, you know, you need, you basically need this whole, like, well rounded, uh, set of, uh, data variations.

So that the, um, the model [00:43:00] can do multiple things and then that's when you start to realize you also need a little bit more size because the more parameters your model has, um, the more of these things, uh, it is able to do. Um, and then there's also things about like. Um, you know, if you have, uh, I think it's, um, the number of tokens of data, um, that you feed a model.

So, so there's all these like, you know, variables and to be honest, I was listening to a podcast the other day about like the guy who, um, basically invented the, the state of the art, which is you pre train a model, then you fine tune a model, then you do reinforcement learning. He kind of created that, um, that flow and basically all language models out there sort of follow that flow.

He did a podcast about a week ago, kind of saying like, you know what? I... Retract my original statement. And yeah, sure. The whole industry is kind of built around this idea, but I actually no longer believe that, um, we know what we're doing. Um, [00:44:00] because, um, it seems like we're not like we've reached the point of diminishing returns.

Now, the models aren't getting significantly better. And we're all following the same thing. I believe now that the process is continual pre training Um, you know, uh, less about this fine tuning stuff is like, it's almost semantically the same shit is it's like continual pre training and then you, you do some final reinforcement learning at the end when you want to kind of adapt your model to a specific use case.

So, so there's all this sort of stuff and like, what, what it reminds me of is that, you know, this, this whole industry is fundamentally, it's, it's as much art as it is science. In fact, it's probably even more art than it is science. Because you, you know, you take this whole data blend, you know, you, you, you put it into train, you run eight epochs, and you come out of the other end, you're like, I don't know what the fuck this thing's going to do on the other end.

And it either comes out good or it comes out bad. Like [00:45:00] we, we actually, our model when it was operating in Bitcoin Amsterdam was fucking fantastic. Like it really ran well. We did one more fine tune before Lugano a week later, and the Lugano one was shit. Like, it wasn't like. You know, not answering anything but just the, the answers, for example, like lost the humor that we had embedded in it, uh, in the first one.

And we're like, fucking hell. Like, you can't win with this thing. We thought we were gonna make it, you know, incrementally better for the, um, for the event. So anyway, this is a long way of saying like, data is like critically, critically, critically, critically important. And then the type of data, the data like, or, or let me rephrase this.

Data is the most important thing. And then what matters? When I say data is not just the data quantity, but more important, the quality, the blend and What that blend is made up of and what you want the model to actually do

Is going to determine what that blend looks like if that makes sense. [00:46:00] Yeah,

**Marty:** I'm adding a bit of context into it Which is like here's how you should probably answer these questions and

This gets into a broader question too. So another thing that came up during that Socratic discussion at our 1031 retreat is again, juxtaposing open source AI verse the open AI's of the world. And what you just described, it seems like the big, large language models are running into this problem where they're hitting.

and not really improving as much as they have over the last 12 months. And that gets into the discussion of the world of, I believe it's a thousand minds or 10, 000 minds verse, um, the world of the Borg, which is open AI running everything. How do you view the future of AI either built by the Borg or a thousand minds which would be Thousands of individual models like Spirit of Satoshi that [00:47:00] do one thing very well And then you combine them with agents to actually produce complex

**Aleks:** Totally.

And this is exactly where we're pivoting our business. So, you know, we're, we're, we're looking at a, at a name now that kind of exemplifies this idea of specialized AI. Because we've gone through this whole process of trying to build a specialized AI. And we've had to build all these, you know, like taking the Bitcoin standard and transforming it into uh, Uh, 2000 Q and A pairs, like that has to be done programmatically.

So we had to build like all of these fucking pipelines, which involve multiple models, like manipulating the data. And then we have this final piece where human beings, uh, check random bits of data and they get, um, paid in sats. For validating, so we've got like a trust, uh, don't trust verify section in our, um, reinforcement learning tool.

So we've got this whole pipeline which takes data in one end and transforms it out the other into a format that you can actually train a model on. This shit doesn't exist yet, like we had to fucking figure all this crap out ourselves. And we're like, man, we could actually commercialize this pipeline as a process and [00:48:00] help any industry, company, body, content creator, whatever, actually train their own specialized models.

Because I do believe. That we are going to have a world of many, many, many, many AIs as opposed to general AIs, which actually ties back into what we said at the beginning, why I don't think AGI is a, is a risk or a threat or a problem is that the more general you get, as I said, the less specialized you can get.

Um, you know, having a marketplace that like this is why there isn't like, you know, the, the world is made up of seven or 8 billion human beings all with their own will, you know, all with their own praxis and needs and wants and the market. Is how we all interact, right? And that is the most efficient and effective way to, you know, for example, build a pencil, right?

We all know this as Bitcoin. It's like, you know, the pencil is made because there's one person chopping trees. There's another person mining graphite. There's another person fucking doing paint, like all this sort of stuff. And we get this pencil. [00:49:00] AIs will function in exactly the same way. Um, because it is far more, uh, efficient and effective to do that and having, you know, trying to build like a board, like you said, that manages many eyes is going to run into its own, uh, bureaucratic problems in the same way as a communist state runs into its own, uh, bureaucratic problems because it can't adapt it, you know, it's, it's not a market force.

It is a centralized force. So I think, yeah. Fundamentally, that's the way it's going to go. Um, I think general models like a good, a good way to almost think about this is generalized models might still function like Google, right? Like if you want to get like a general direction of something, um, you know, a general feedback or just something like good enough.

You want to ask a question, you probably go to a chat GPT. Like, this is not to say chat GPT is going to disappear. Like you still go to Google to get some basic information, but yeah. When you want to dig, you will go to a forum, you'll go to someone you trust, you'll go to, um, [00:50:00] you know, you'll go to like a Reddit thread or something like that, and you'll go down the rabbit hole and you'll get way more richer information, but you're not going to get the breadth of knowledge.

So like specialized models will be like the forum that you would go, like an online forum, and, um, ChatJPT will be like your basic Google search, and I think this is sort of how the, um, the industry is going to evolve.

**Marty:** So it's pretty optimistic, right? 'cause everybody's afraid Yeah. That open ai. Totally. So you think they're gonna fail to achieve what their posturing they can achieve just 'cause of the limitations of the

**Aleks:** Totally, man. Totally. Totally, totally. It's the, it's the same fucking thing, you know? They, they, they like the, the, the risk as I said that we face.

Is that, um, but I just think the cat is too far out of the bag for them to stop it, but like I said, the risk is that, [00:51:00] um, you know, companies have to use like licensed AI models, um, and those licenses have been approved by government bodies. For use in commercial applications, right? So if you are a business in Europe, for example, that, you know, is doing, you know, uh, selling some sort of health foods and, you know, your customers have questions about health foods and, you know, you might want your own language model that talks, you know, about those health foods.

But, you know, you're not allowed to use your own language model, or you're not allowed to use it because, you know, from XYZ company that helps you build your own language model, you have to have open AI or some sort of like woke subsidiary, be the licensed entity that helps you build your language model because it is considered safe and responsible.

So, so that could be, you know, the risk. Um, but, uh, in terms of [00:52:00] like, You know, them being able to functionally build, like, the ultimate AI that runs and controls everything, I think it's a fucking, it's a nerd's pipe dream, man.

**Marty:** No, and it's very important, too. Speaking of the nerd's pipe dream, you mentioned him a lot, but I think he's somebody that should have a lot of focus on and people should be very skeptical of what he's trying to do.

It's just Sam Altman, because he's got open AI. Apparently he doesn't own any of OpenAI, he's doing it all realistically, but he has WorldCoin, which you can see, that he wants to probably leverage that to gain access to his models and pay, and that'll be how he monetizes OpenAI, if he can successfully force WorldCoin on the world.

And then, a lesser known company that he's involved with, that many people don't talk about, is like a nuclear... Um, company, like the nuclear energy company, where you can see he's beginning to position himself, like, alright, I have the AI, I have the [00:53:00] digital panopticon, cryptocurrency. And then there's this other company, I forget what it's called, Logan, if you can look it up.

Um, but it's a nuclear energy company where you can sort of just get to the base of everything. And if you control those three things, it's a really scary future.

**Aleks:** Yeah, I mean, you're 100 percent right. Uh, I just think the, you know, always the irony of, uh, of these kind of people is that they, um, they... I don't know, they underestimate the, the market, they underestimate how nimble, you know, smaller competitors, uh, can get.

And like, I mean, just, just the, the, the best thing, I guess, about the, the AI space is also the worst thing is that, um, you know, I saw, I saw a stat, you know, people say AI was, uh, sorry. Chat. GPT was trained on the whole internet and like [00:54:00] the, that, that is like, so far from the truth. It's not even funny. I think the, the scale is something like, um, the scale is something like the amount of data that chat GT was trained on versus how much data there is on the internet is kind of like El Salvador, uh, as a country and the sun.

Like, it's like that, like the, the, the, the, the, it's like 20 orders of magnitude or 30 orders of magnitude difference. Like there is always going to be more data than there is able to train it on. And what that means is. It's impossible for one company to gather up all that data, like, you know, just, just think about like, um, I mean, think, think of just like one fucking law firm, like that specializes, for example, in like one niche thing, I don't know, like, uh, give me a topic, like, you know, a law firm that gets people out of traffic, [00:55:00] traffic tickets, right?

Most of the data, most of the crap that they have, like, is not going to be stored online anyway, it's not going to be accessible to OpenAI, it's not going to be accessible to anybody else. Like, you know, these guys, if they wanted to automate some of their processes, for example, could get... And an agency or, or a, um, you know, or a practitioner or someone like that to come in and help them build their own, uh, language model or another good, good example that I, uh, that I have, it's going on in our new pitch deck is recruitment agencies.

What do recruiters do? They spend most of the time sifting through fucking resumes, then doing first interviews, second interviews, third interviews, trying to figure all this stuff out. They're sitting on a mountain of like valuable data, which think of, you could almost think of it like oil that's shale and we don't know how to get it out.

And, you know, they can't in its raw form, train a model on, but if they could somehow run that data, run all those resumes, run all that feedback, run all those interviews, run everything that they've got through some sort of process, [00:56:00] transform all of that and train like the ultimate, you know, Yeah.

Technology recruitment agent for their specific vertical or their industry, like they could automate all of their stuff. Now, OpenAI is not going to be able to do that. Like OpenAI, like, ChatterUT might be good at, you know, reading some resumes, they can feed it a bunch of general stuff, but it'll never get good at that specific vertical.

And, which means that I think, you know, the marketplace of many, many AIs, many, many players. Doing things, you know, building ml ops, um, which is essentially what we're going to try and do is, um, is going to just outcompete like they, they just can't fight a. You know, a hundred thousand front wall, which is essentially what this, um, this AI proliferation is going to be.

So that's why, like, I'm not, I'm not too concerned that the only thing that they can pull off is the licensing. Um, but I think, as I said, I think we've, things are moving so fast that it'd be very hard to get like licensing in place now. But, you know, I mean, I [00:57:00] guess it could be wrong.

**Marty:** I see. Pull up the, uh, the executive order and I put in slack before we jumped up control F for license.

So Biden came out with a executive order on safe, secure, and trustworthy. There you go. There's those words, right?

No license. All right. No license in the executive order. That's good. But yeah, I mean, we can scroll through this. I think briefly skimmed it before we hopped on, but, um, I think I'll pull it up on my computer too. So I can see it, but it seems pretty bland. Just got to make sure it's safe. Uh, there's some woke, woke, uh, woke talk in here, promoting innovation, competition, setting up for consumers, supporting workers, advancing equity and civil rights, making sure the government uses AI responsibly.

So first executive [00:58:00] order from the Biden administration came out this morning, October 30th, but. No license. Which is good. I didn't see

**Aleks:** that. Yeah. Okay. Okay. There you go. So, I mean, you know, this is, this is a perfect example. Like this is, um, you know, it, it always starts slowly, slowly, and then they kind of lean into it, but you'll, you'll hear it echoing these words all the time, safe, responsible, trustworthy, like, you know, all the words, like when it's the classic Streisand effect, you know, when the government tells you they want to do something for your safety, you know, exactly.

It's the opposite thing, bro. Yeah.

**Marty:** Yeah.

Diving into like the future of a thousand minds. Like, how do you think? This will work. What will the end product look like? Like agents interacting with each other. And then I guess we could tie Bitcoin into this too. Like does Bitcoin over the Lightning Network using something like Macroon permissions to give these agents allowances?

Is that a use case that you see as... [00:59:00] Possibly.

**Aleks:** I mean, I think, um, I think machine to machine payments makes a lot of sense. Um, I mean, I, I think we're quite a way away from that. I was just listening to, there's a really good podcast, um, called latent space and this is, uh, some guys, they do like some, um, Yeah, they basically do a weekly podcast and it's pretty damn good.

And they did one recently with this lady who was, she was previously, I think, head of product that Dropbox and, um, and she, they just raised 200 million for, for their startup. And they, they're focusing on building agents and the whole podcast was around how like agents just don't work yet. Um, and you know, there, there is a lot, like if you look at Twitter, for example, and you look at, you know, AI agents, you, you'll think that the future is already here.

We've already got agents, but you know. You, you listen to the people actually at the very, very, very tip of the spear on this, and they know that, like, we are so far from agents that, like, it's not even funny, like, we don't... We don't [01:00:00] even like these things are practically still macros. Like, you know, we haven't really gone too far from Excel macros.

Um, but there is progress being made. And, you know, the assumption is that at some point in the next 5 10 years. You know, maybe every brand, like I kind of think of it this way. It's like in the 60s, every business kind of adopted the telephone, right? And, you know, in the 90s, they adopted the, you know, the cell phone, you know, in the 2000s, they started, you know, every website started having a, sorry, every business started having a website.

And then, you know, in the 2010s, it was a social media page. You know, everyone had a Facebook something like that. And I think, you know, over the next decade, like, Every brand, every company, every, you know, Content creator, influencer, whatever is going to most likely have some sort of avatar or agent that represents them that does some stuff for them that either filters noise or, you know, [01:01:00] executes, you know, emails and deals with like the noisy stuff and the, the, the, the, the menial tasks and maybe even like goes out there and performs economic functions on their behalf, um, based on what you tell them to do.

And I think, you know, there'll be probably some future where people who. You know, a really good at like, you know, researching and finding gaps in the market and then able to direct a suite of different agents to go and perform different tasks. And, you know, they might build like, uh, small one or two man startups, you know, that really have a lot of the base work done by agents.

Like, I kind of think that that's where things are going to go. That doesn't mean that these agents themselves have any agency. You know, uh, we as human beings, as the directors of the task have the agency and the agents are maybe just more like, uh, executors, uh, of specific tasks that, you [01:02:00] know, have some sort of like semantic, uh, element where they, you know, can understand things they can read on the internet, et cetera.

Right. And, you know, I, I, I do believe something like that will happen. Um, I think to get there, we like. There's a number of things that need to occur, like first, compute needs to come down significantly. Compute is way too expensive, um, at the moment for that kind of a future to exist today. Um, which means simultaneously, not only do chips need to get better, I believe in the next year or two we'll probably see, uh, AI A6 come out.

Um, but also energy needs to get cheaper. And, you know, this is something we'll talk about, obviously, uh, in a minute. Um, but then also, thirdly, is the frameworks and the pipelines to take. All of the data out there and actually transform it into something that genuinely tunes and trains a model like around a [01:03:00] particular topic or brand or persona or character to a high fidelity degree.

Those pipelines don't exist yet. And as I said, that's something we as a startup are trying to build based on what we've learned from trying to build Satoshi as a model. So all of these things sort of need to start to emerge, um, before we can have that kind of future. Um, and to kind of tie that all into, uh, into Bitcoin in some sense is that transforming that data.

And doing all of that sort of stuff is going to require, uh, compute, is going to require multi agents. It's going to require chains of language models and AI, uh, programs, essentially, you know, helping transform and manipulate. It's going to require human feedback. And across each of those, uh, components of the chain, having an incentivization model, uh, having some sort of, uh, economic component, [01:04:00] I think is going to be essential.

And this is where something like Bitcoin, obviously. Comes into play and you know, we've got a very rudimentary version of it. Like if people go to train. satoshi. com, sorry, train. satoshi, for fuck's sake, train. spiritofsatoshi. ai, um, they will be able to see like how we use it. Like you can go in there, you can do like the whole trust and verify.

You can, um, you can answer like Satoshi, you can rank, uh, Satoshi's responses and all this sort of stuff and you get paid in sats. For your contributions, like this sort of stuff is going to proliferate and I mean, what, what better money to use? What better economic incentive to use than the, you know, the money of the internet, you know, money that is energetically important.

You know, sound and conservative, like obviously Bitcoin fits into this so well, I just, I just caution on people sort of like jumping the gun like, Oh, yeah, you know, we're going to use Bitcoin tomorrow for this, like this, [01:05:00] there's a bunch of other things that need to come into play before more of this happens, which is what I'm banking on.

I think there's going to be a decade. Process not, uh, I think we're going to go, you know, we've had the Gartner hype cycle, right? I think next year and the year after are going to be a bit of a trough for AI, like there's going to be a bit of a, uh, all these massive expectations, blah, blah, but, you know, in that trough is going to be where a bunch of the real value is built, like these pipelines, new chips, all this sort of stuff.

And over the course of this decade, I think we're going to see some real interesting things, uh, be built out. I

**Marty:** was told we were one to two years away from all of this.

**Aleks:** Haha. Yeah. It's going to take longer. We were, we were one or two years away from million dollar Bitcoin as well.

**Marty:** Apparently that's actually exactly what I was going to go into.

Cause it is fascinating when you like, I think Bitcoiners have a really unique perspective on this, particularly Bitcoin miners, um, seeing the hype cycle and AI, [01:06:00] uh, particularly around GPU compute. And it's energy intensity and how expensive the GPUs have gotten. Miners are looking at that like, Hey, we've seen this before.

Um, it's very similar to the trajectory of ASICs over the last five, 10 years, even, and I guess that's the big question in the space now, like how much. Of this AI stuff is hype. I think many people would say probably 99 percent in terms of commercial applications And then yeah, like the the GPU commodification maybe moving the ASICs, that's one thing I did want to touch on since you mentioned it is Obviously ASICs and Bitcoin Proliferate because they do one thing one thing only which is hashcash SHA 256 Help me understand how this would work in AI and training models like because ASICs do one thing one thing only All right AI models using GPUs, they do multiple things, or would you have specific ASICs for specific parts of [01:07:00] model building and training?

Yeah,

**Aleks:** this is a little bit outside of my technical scope to really explain properly, but conceptually, I think I understand is that, um, when you are, when you're using, um, a GPU to do a training, um, as far as I understand, and I don't understand much here, but it's like the single task. Is, um, is something to do with like, uh, word relationships.

So, so it's like, it's, it's still computing, it's still like a relatively narrow task. And, you know, the, the limiting factors around like RAM and how much, um, you know, cause like what these models live on is, um, it's like, it took me a while to wrap my head around it in the beginning, but it's like. And when, when you have a 30 billion, uh, parameter model, like it requires an amount of RAM or VAM, uh, from a GPU for it to operate or [01:08:00] to run, like, it's not like traditional storage.

Like it doesn't get stored on like a normal database, for example. Like it's gotta be operating on a GPU. And I think what's gonna happen is in, in the same way as we did with Bitcoin, we're gonna figure out what those, um. What those particular elements are, and I believe they'll be probably a six for training, and they'll be probably separate a six for inference on.

And, you know, there's going to be, you know, whatever element of the GPU is most important for, you know, running those specific tasks, I think is going to be refined and will have application specific integrated circuits will have a six for specific a I tasks. I think probably training will be the first one that they crack.

Um, and then inference later, because that, from my understanding, is a little bit more

**Marty:** broad. It'll be interesting to see how NVIDIA thrives there, because they don't create... They don't build ASICs, right? They're purely GPUs right now?

**Aleks:** I'm pretty sure,

**Marty:** yeah. Yeah. Yeah. The hot chick on the block [01:09:00] may, uh, may get left behind.

No, like, going with the trend too, you can argue that we're reaching the point of ASIC modification in Bitcoin, BitMame, with their S21 series priced at really low, at 14 a terahash. Where, if you go back to, like, the S19 XP, when it first hit the market, it was 40 a terahash, and quickly went up above 100, uh, during the 2021 bull market.

Who knows? The 14 a teradash for the S21 is just a product of where we are in the market and the fact that we're in the bear market. But many people seem to believe we're getting closer to ASIC commodification and Bitcoin. And you have to imagine that you're going to see a similar trend play out in AI as well as the incentive, the economic incentive is.

Just to be more and more efficient. That's it. That's

**Aleks:** what we do. And this is the thing, it's like, you know, to, I guess, to tie this conversation now into energy. It's like, the energy is the one thing you just can't fake. Like, you just can't print the shit. I'm sorry, you know, you can't like, you know, something uses energy.

It's like, there's no way [01:10:00] around it. And the forcing function is to use the energy smarter, better, you know, more efficiently, more effectively. That's it. Like, you just can't, there's no way around that.

**Marty:** No. And it's... Again, I think Bitcoiners, particularly miners, have an edge. In this particular part, because again, AI, AI computation is extremely energy intensive.

There's a number of things that I'm really looking forward to seeing how they play out. Number one, narrative wise, like does AI get hit with the energy narrative as hard as Bitcoin has, or does the fact that Nvidia, OpenAI, Facebook are all in, and a lot of these, a lot of the heads of these companies are pretty close to the government.

Do they sort of get priority over Bitcoin, or do they get the same scrutiny that we have historically? Uh, or do they become an ally and just do they help shift the narrative, uh, which seems, uh, maybe not being led [01:11:00] by in the AI industry, but it seems like we are having a shift in the energy debate about like, Hey, energy is pretty fucking important.

It's been made very clear the last two years, particularly. Um, do they become allies and say, Hey, no, we need to build out as much energy capacity as possible. And then another trend to pay attention to is the competition for Rackspace. Um, I know there's a ton of mining companies that are getting courted by, uh, AI companies looking to host GPUs to, to sort of prioritize GPU Rackspace over ASIC Rackspace at the moment, Bitcoin ASICs.

Um, interesting. And there's, uh. I didn't know that. Okay. Yeah, Rackspace, I mean, we learned this after the China ban. It's very tight in the United States, still is. People are building out a lot more capacity, but there are limitations and you have this, I guess people could call it a black swan of AI really taking off, particularly in the United States within the last [01:12:00] year.

And that competition for Rackspace has gotten extremely more competitive. Um, so it'll be interesting to see how they play together. If the AI industry becomes an ally or tries to box the mining industry out, particularly in the United States, um, and then the economics of it all, and there's nuance. To the different types like I believe that you're going to have co located AI and Bitcoin mining farms because if you want cheap energy We're finding particularly here at ERCOT and other parts of the country in the United States that you need to be Engaged in demand response and from what I understand AI particularly if you're doing Model training can cannot suffer downtime.

And so if they want cheap energy, they're gonna need to find a partner that can Participate in demand response, which is Bitcoin miners. And so you'll have. These sites that are co-locating GPUs for the time [01:13:00] being, maybe asics in the future for ai, and then Bitcoin, asics. Um, you get a lower cost of energy when you're asked to respond to demand.

The Bitcoin operation spins down, sends electricity back to the grid, and the AI operations allowed to operate continuously to train their models.

**Aleks:** I mean, that would, that would be, that that makes the most sense. It's just, you know, you, you would hope. You'd hope people aren't stupid and like, because the alternative is like, Oh, you know, we need to ban the Bitcoin mining because now we can't run our AI.

And if we don't run the AI, China will and China is going to beat us. So therefore. Uh, we should turn off Bitcoin mining and make, uh, save the, save the, uh, the limited resources we have for our AI compute instead. Like that could be the bad version of it.

**Marty:** Yes. And that concept limited resources is the most frustrating thing because they don't need to, they're [01:14:00] artificially limited if you will.

Exactly. Yeah. Via, via government mandate. Um, and it's not even only government mandate. ESG is dying, but it has done a very good job over the last decade of disincentivizing the build out of reliable energy infrastructure, which is the big issue coming out for the Bitcoin times this fall. The energy issue, energy debate is raging.

It's very important to Bitcoiners. And so I guess we can begin diving into what we're trying to accomplish with, with the, uh, the Bitcoin times this fall. Yeah,

**Aleks:** for sure, man. So, um, yeah, let's, uh, let's segue into that. So, um, I think, I mean, for those who don't know, I think you and I probably did a episode. I think we did the Austrian edition last year, right?

When I came out. Yeah. So, you know, for those who aren't privy to what [01:15:00] this is, the Bitcoin times is something I do once every year, and I try and get it. Uh, six or seven, uh, essayists or thinkers, brains, uh, in the space to write around a particular topic. So last year, obviously we had Seyfedine, Pierre, Goldstein, Rahim, Parker, and, um, uh, Conrad Graf, write on basically Bitcoin through an Austrian lens and Austrian, Austrian economics through a Bitcoin lens.

Um, and that was like, it, it aligned with the first time I actually printed, uh, these things as a collectible. And, uh, This year when I was thinking about what we were going to do, I was going to do like a, you know, I had options to do a philosophy edition, a, um, a macro edition, markets edition, privacy editions, cypher punk edition, like all these sort of ideas, but it just felt right considering the.

The climate hysteria, the ESG stuff that's going on. Um, you know, the [01:16:00] mining talk and, and, uh, probably also like a personal interest of mine, like I've been going down the Nietzsche rabbit hole and sort of Nietzsche's position on like energy and vitality being. Um, basically the source of life and he's, you could almost sum up his entire argument about like the fall of man being, um, that we've, uh, we've traded vitality for a false sense of morality and, um, and in the process we've become basically, uh, slaves.

Um, and that's sort of, you know, something I wanted to dig into. So anyway, the long story short is. We, we're doing the energy edition this year and it's got obviously yourself, uh, headlining alongside Brian Gitt, alongside Gideon Powell, um, Harry Sudeik, uh, myself and, uh, Drew Armstrong from Cathedral and Andrew [01:17:00] Myers from Satoshi Energy.

So, um, yeah, man, I'm really looking forward to this. And I, I wanted to specifically like dig a little bit into your piece. Um, because I know you were going to tackle the ESG side of things.

**Marty:** Yeah, I mean, this is something I've been beating the drum for many years now at least five or six Yeah, probably closer like four or five actually But I like to think I was early on in this trend and it feels like five or six, right?

That

**Aleks:** doesn't like the last like sometimes I think I left Australia like fucking ten years ago, but I'm like 2019 like it's four years like we've seriously gone through a battle in the

**Marty:** last four years No, but I mean, ESG is the perfect, um, sort of, um, what's the word I'm looking for? It's the perfect manifestation of that Nietzsche line of thinking you just described, which is we've replaced vitality with the [01:18:00] moralization of society.

We think we're moral beings and this moralizing has led to, A complete rejection of reality and what actually makes the, what we're doing now possible. You're on the other side of the world connecting being internet connection. I've got a camera here. I've got lights here. You've got a laptop and like all this is made possible by energy.

And ESG, particularly the E part of it, we can even dive into the S and G part of it as well, or just a complete rejection of reality, and it actually really ties into the AI conversation we were having earlier in this push to sort of control the language. It's a complete rejection of reality and attempting to centrally plan, um, a moralized view of what is.

What the world should be on the markets and energy, uh, is a big part [01:19:00] of ESG. Obviously it's probably the most predominant part of the ESG movement over the last decade and a half. And we've really seen the repercussions of what rejecting reality and trying to moralize has led to, um, which is less reliable energy infrastructure, human suffering.

I mean, I think one of the most stunning facts, uh, of. The last two years is the fact that more people died due to lack of access to energy in Europe last year that were killed in the Russian Ukraine war, which is. Whoa. I didn't know that. Okay. Insane. Let me make sure I have, I pulled it up before, but, uh, the.

**Aleks:** Yeah. It's funny. Like. The suffering as a concept is like something we'll have to go through, but it's like, it's always so stupid when it's like unnecessary suffering. It's like, you know, you can, we [01:20:00] have the capacity to make all the energy we need, um, and like, you know, Save the suffering for, you know, greater things.

It's like, you know, there's, you know, there's suffering when you take a stick and you put it into, you know, your, um, the front wheel on the bicycle and you fucking wipe yourself out. Right. And you're suffering because you're like, you literally did it to yourself versus like suffering to build a business or to, you know, Start a family or to create something like this There's like one is like a suffering that is trying to reach for the stars And the other one is a suffering of like self induced fucking stupidity and like it's like the contrast is It's so extreme.

It's not even funny. And like, as a, as a civilization, we are spending more time putting sticks into our own spokes than we are like reaching for something of meaning. It's insane.

**Marty:** Yeah. I mean, [01:21:00] and yeah, so the stat, yeah. During the winter of 2022, there were more deaths in Europe caused by the shortage of energy, uh, which led, I mean, people weren't able to protect themselves from cold temperatures than from COVID and the Ukraine war combined.

Um. Which is insane. And then we saw the headlines coming out of Germany, and this is Germany, I think, is the perfect microcosm of the insanity of ESG, they started their transition to a renewable grid system early this century and have successfully decommissioned reliable coal and nuclear power plants over the last decade and replace them with wind and solar.

And you look at Germany, You just look at the weather there, uh, it is not conducive for producing a lot of power from wind and solar. It's very cloudy there. Um, you have stretches of time where the wind doesn't blow as much as you'd like to think. And then, like, they're [01:22:00] doing this to save the world, to save people.

Maybe you don't even have to say to save the world, you can say we want to save, uh, humans from suffering and dying. And it's very. Uh, ironic because this transition led to human death and suffering, uh, during a time of war, uh, when the energy supplies, particularly being provided by Russia via Nord Stream 2, uh, were politicized and attacked physically, uh, really cutting off Germany specifically, but a lot of Europe from reliable energy.

sources, which led to higher energy prices, lack of energy accessibility, uh, and deaths at the end of the day. And so this whole rejection of reality, the boogeyman that you described earlier, climate change. Uh, global warming, which doesn't have seemed to have materialized as somebody has been following it for some time, um, you're saving people by killing people at the end of the day, and it's just [01:23:00] this complete inability to recognize that we only have what we have today because we are able to To utilize energy to our benefit.

I mean, going back to the beginning of the conversation, the sun provides us energy to wake up, go work, food, banana, provides us energy, uh, to go toil, uh, and then you work up from there humans with our logic and our ability to, to think creatively, have figured out ways throughout millennia to harvest and get increased productivity and efficiency and leverage essentially on what we can do physically.

Um, and really create machines to enhance that, that beautiful capability that we have. And we've gotten to a point And it's funny because you can point to the Henry Adams curve, which is, uh, energy production per capita globally. And when did it start to flatten out? It's been [01:24:00] flat for 50 years in 1971.

It's like this whole fiat world, uh, going disconnecting money, um, from any sense of reality as well as just all debt paper money, um, has allowed us to sort of reject reality. And I think it does stem from the money when you disconnect money from any. hard truth in the physical world. Just make it this thing that you can print willy nilly, um, you're then able to completely begin rejecting reality in other parts of the world.

Energy is, I think, one of the most obvious sectors that has been neglected over the last 50 years.

**Aleks:** Yeah. You can just, you can lie to yourself. What you were saying reminds me of a little passage, uh, in the piece that I was trying to write. Um, I want to. Thank you. Thank you. Uh, find it quickly enough, um, like,[01:25:00]

yeah, I'm not gonna find it now, but, um, the...

Yeah, damn it. I, I had it highlighted, but then I refreshed the page. Fucking moron. There was a, there was a section about that. But, yeah, I mean, the, the relationship between, um, between energy and money, I mean, you know, the, I think, I can't remember who I first saw write this, like, Call calling Bitcoin energy money.

Do you think that was a sailor meme or was that like?

**Marty:** Sailor definitely popularized it

But even before then people were like tying it to Henry Ford's [01:26:00] idea of energy money back in the day

**Aleks:** Henry Ford or Buckminster Fuller Cuz yeah, Bucky was talking about like kilowatt hours Per something right as like the unit of money Yeah,

**Marty:** I think BitBane, uh, BitBane popularized it. He's a lesser known.

Bitcoin Twitter guy, but he's been really focused on the energy thing. I think we can safely say that sailor popularized it

**Aleks:** yeah, I mean the You know the the point that I try and go into is that I say Like you know Nietzsche talks about the ubermensch right like so there's kind of New man that emerges from the age of what he calls the last man, and you know, to him, the last man was like the, um, basically the NPC or the lemming as I like to call them is like, you know, he predicted a world that [01:27:00] will because it orients itself around average around equality.

Um, around, you know, lies and has, um, has a disdain for vitality and power and energy. Um, will, you know, basically the world will transform into ugliness. And we see that like, you know, did you see the, um, the thing on Twitter today with that stupid, uh, fountain in Europe? Like that last fountain. Oh dude, you fucking hell

It's, look, it's like a, you know, this new fountain of like, and the sculptures look like basically turds, like, it basically looks like a fucking pack of kids from, you know, preschool got together and like slapped a bunch of clay together. And this is the new, like, they spent $1.8 million on it. Um. And like, this, this is the ugliness that the world is, uh, headed towards because, you know, we, we lack beauty, we lack vitality, we lack energy, we lack something, uh, to reach for.

And, [01:28:00] you know, the, the, the piece that I wrote is, uh, called Uber Money. And I say, you know, the, the, what needs to happen for the Ubermensch to kind of... Uh, emerge is a mixture of the right seeds, uh, to be planted and that is the, um, you know, the things like Bitcoin, things like, uh, you know, the warrior virtues, et cetera.

And, you know, humanity has those seeds naturally, but I think Bitcoin is one of the most important seeds, but then also you need a lot of fertilizer. Like you need a lot of basically shit manure and that's what, uh, we've got in the world today and from that, you know, a better, a better quality human being is going to emerge.

Yeah, there we go. What the fuck is

**Marty:** that? No, this reminds me of the statue. I think it was like a Martin Luther King statue they put in Boston. It just looks like somebody holding a cock. It's, uh. Yeah. It's disgusting. Like, look at [01:29:00] this. What is this supposed to represent? Vienna's renaissance produced some of the greatest structures.

This fountain was just unveiled in Vienna. This is in Vienna, Austria. Yeah. Vienna.

**Aleks:** Exactly. Like, this was, this was the cradle, this was one of the cradles of civilization. I was like, what the fuck is that?

**Marty:** Well, and this reminds me of part of something I said on stage last week at an event in Missouri, which is, and I think, you I'm touching on in the piece as well, which is, this is the beauty of this particular inflection point.

There's many people throughout the world who wholly depend on the government to fix these problems. And what we're seeing in America, particularly in the West, the Rust Belt, is that Bitcoin miners being incentively economically driven to get the lowest cost of power, essentially. Fixing the problem that Triffin's Dilemma created in the first place, which is you build all this energy infrastructure and had a [01:30:00] large manufacturing base.

You then ripped every, you've ripped the U S dollar off the gold standard completely. And to ensure that the dollar was a reserve currency of the world, you flooded global markets with dollars and bought their goods instead of manufacturing your goods domestically. Uh, all those manufacturing plants, steel smelting plants moved offshore, leaving behind this.

Energy infrastructure that was being wholly underutilized and still is to this day and Bitcoin miners are essentially fixing the problem That Triffin's dilemma created in the globalization of the dollar created Which is they're now saying hey, I need cheap power middle, Tennessee middle, Kentucky middle of Oklahoma I see at these substations that haven't been utilizing their full capacity for some time will come in.

You can buy that power in bulk from the people you buy power from, get lower pricing and we'll use that energy. Um, this of revitalizing in a small way, these areas that have been completely [01:31:00] neglected here in the United States for, for decades. And I think this really highlights and it's beautiful with Bitcoin and also AI too.

If we don't get cucked by the licensing, like we don't need to ask the government to fix these problems that created this, these problems in the first place. Uh, they broke the money, which broke everything and you have the tools at your fingertips, whether it's building software at the protocol level of Bitcoin, building software at the application layer of Bitcoin, uh, to basically give people access to a different monetary system and then on the physical side of Bitcoin, the mining infrastructure, like it's just the natural way of things.

Miners being economically incentivized is going to these areas that have been neglected and breathing some life into them. It's not going to save these cities and these towns wholly by itself, but it's the spark that's needed to begin reversing the trend. And you can do this today by yourself just [01:32:00] using pure economic incentives.

You don't need mandates or spending bills to be passed. You can go do this yourself. You can build Spirit of Satoshi and give people access to, to good information about Bitcoin, you can go try to get cheap power to, to mine bitcoin profitably. And the positive externality of these things is better information and better revenues for small towns that hopefully can be reinvested to begin fixing the problems that ripping off the gold standard started in the first place.

Yeah. This,

**Aleks:** you, you, you touch on something that I've been. Hopping on about recently, which is a, the, the, the conquest approach or like the, the approach to like claim space and claim territory versus the one of, uh, defense. And this is where I think like. You know, I've kind of had it with, like, libertarians and libertarians and all this sort of stuff, like, you know, Everything they seem to do comes from a [01:33:00] place of defense.

It's like, okay, we're gonna go and cease it, you know, uh, you know, don't don't tread on me, like, non aggression principle, this sort of stuff, like, and you know Notwithstanding the the wisdom and things like the non aggression principle, etc but the the energy where they all come from is one of defense and one of like Like leave me alone.

Whereas what you're sort of describing here is like coming back and claiming the fucking energy You know claiming the land building shit again Not asking for permission. It's a, it's a conquest. It's a, it's a conquering energy. It's like, it's an attacking energy. It's not a running away from energy. It's a going toward energy.

And this is something for me particularly, um, that I have, uh, at times it's, it's annoyed me about the Bitcoin space because, you know, we, we fundamentally are, um, You know, many of us are more libertarian than anything else, but like, it's not enough just to [01:34:00] sit there and, um, you know, stack your sets and like, you know, act like you don't exist and all this sort of stuff like that.

There is that there's There's an imperative to some degree to go out there and build shit to create shit to like, you know, if you don't like The way, you know, like I guess not to blow smoke up my ass, but I guess I'm an example of this I didn't like the way chat GPT worked. So I went spent 2, 000 hours figuring the shit out and then Raised some money and went out and started building something and like I'm gonna build a competitor to it It's the same with anything else like you don't like seed oils Well, go and fucking make a product that, like, competes with the seadolls.

You don't like polyester and, like, sleeping on shitty, you know, uh, bedsheets that are made of plastic? Well, go and fucking build a cotton thing, like, you know, you don't like eating the bugs? Well, go and start a farm, like, produce meat, [01:35:00] like, this is so... Like, that energy of conquest, I think, is fundamentally important, and like, it's in the word, it's like, you require energy to go out and actually claim land back, to claim territory, to claim space, and this is what made the West fundamentally great in the first place, like, what did we do?

We went out there and we claimed Fucking space and now we're receding like oh, we can't use that much energy. We need to conserve energy We need to like turn off our heaters at a particular time. Oh, we can't do this. We can't do that it's like it comes from such a like a place of weakness a place of like

begging for like the crumbs that are like sort of Spilt off the table and and I just find that so pathetic Whereas, you know, real, real leaders, real, like, a culture and a society and a civilization with some vitality wants to go out there and like, [01:36:00] you know, it'll, it will still argue, there'll still be fights, there'll still be conflict, but it'll be about like, The place in the stars versus, uh, groveling and bickering about, you know, your place in the dirt, right?

Like it's, it's a complete different, um, paradigm shift. And I think that's just so fundamentally important. It's, you know, we've been, we've been playing defense for too long. It's, it's literally time to play attack now. And I think this is, you know, this is what this conversation reminds me of.

**Marty:** Yeah. And it's beautiful because you see it in the Rust Belt.

Very, like it's been completely neglected again for decades. And again, it's not going to, it's not a panacea for everything, but it is a sort of, what I've seen, what we do, what Standard Bitcoin does in Tennessee, in Kentucky, they go into these rural towns that have had manufacturing move out. We go to. See the substation.

We're like, Hey, are you utilizing all this capacity? [01:37:00] You're like, no, I'm like, all right, how much can you get out of it? Like another megawatts. Like, all right, get that energy delivered. We'll buy it from you. Contract sign, build infrastructure, plug in miners, and the direct sort of positive outcome from that relationship is with the utility.

So that's where it starts with us as utilities. Like, Oh, we can actually make money in the way it works in this part of our country is. It's utility co ops and the co ops have a mandate to keep prices low as low as possible for residential consumers. And since we come in and soak up that excess capacity, you can buy more energy in bulk, uh, which means they get lower pricing that can pass on to consumers.

So they're like, all right, we're following our mandate. We're making more revenue. Um, as a mining company in Tennessee, we're paying taxes on that. So the state's getting more revenue. Um, but that's like the, the direct positive outcome is between us and the utility company. And again, like you said, just go out and conquest, like these parts of the country have been completely neglected by the [01:38:00] government for decades and almost forgotten here in the United States while the coastal elites, um, reap the benefits of the can till in effect and have seen in.

An insane amount of wealth accumulation, um, which has driven the, the wealth gap here in the United States, but what we've seen is that once we get in with the utility company, they see the obvious benefits of the increased revenue that they're going and they tell their friends and other utility companies what's going.

We don't even have to do outbound. Sort of exploration of new sites people are coming to us. Okay, come do this in our town come to us in our town So this is I think a direct example of just go out and build the better world and then the people you interact with will See, hey, you're actually coming and helping me making my business better Which allows me to serve my customers better at the end of the day Um, and then there will be small domino effects that lead to larger domino effects after that, but it's literally getting out there and just doing it.

Not asking permission. Okay, you've got a substation. [01:39:00] You're not utilizing it. Let's, let's utilize it. We don't need permission. Yeah, it's,

**Aleks:** it's, it's so simple. It's like, and You know, I should say, like, people shouldn't confuse simplicity with, um, with ease, right? It's not easy, like, you gotta, you gotta do the fucking work, like, there's no, there's no, like, uh, magic wand that someone's gonna wave and, like, all of a sudden all the problems go away, like, you've actually gotta go and do the work, but it's actually fucking simple.

Like, you, you want something, go and build it. You know, you wanna, you wanna go somewhere, you fucking go there. Um, you wanna create something, you roll up your sleeves, you figure it out, and you create it. But that's, that's what, you know, human beings with agency do. Um, you know, this is what, like, AI will not do.

Like, it's not gonna figure this shit out themselves, itself. Like, we are the ones who are going to direct these tools, you know, Bitcoin, AI. ASICs, miners, energy, power plants, the grid, all these things are fucking tools that we as the masters of [01:40:00] our world, our universe, like we're the ones who direct these things and like, you know, it's, it's such a small shift and it, and all of this stuff that we're saying, it's like, it's so obvious, we all fucking know this, but I think it's sometimes you need to be reminded of it.

This is literally, like, without sounding woo woo, but, like, you, you're fucking pulsing with energy. Like, a human being is an energetic being, and, like, you just need to direct that shit in a particular way, and, like, the people who transformed history, you know, the Alexander the Greats of the world, the Julius Caesars, you know, the Napoleons, the Nikola Tesla's, the Isaac Newtons, like, these people directed You know, their energy to, to, toward an outcome, toward a vision, toward something, and they, they literally fucking change the course of human history, and like, that's the energy we need to take on if we're going to fix things, because for damn sure the, you know, the monkeys that are [01:41:00] pulling the strings at the moment are for damn sure not going to fix fucking

**Marty:** anything.

No, and that's where I like to make a vote harder. Daddy's always seems so dumb to me. It's like, what is the most practical way to do this again? I think Bitcoiners recognize it almost right away because they recognize the fact that Bitcoin succeeded because it's been this grassroots movement. Like if we're going to fix these larger structural problems throughout our economy, with this particular example, the energy sector, it's going out there and doing like grassroots movements, like substation by substation.

And then you get allies starts with utility companies and the residents are like, Oh, my bills staying lower in this higher, high inflationary environment. Why is that? And they ask questions like, Oh, actually a Bitcoin miner came in and allowed us to buy energy in bulk, um, you know, which allows us to keep prices lower for you.

And then you get allies, obviously you have the green pieces of the world and others trying to besmirch Bitcoin miners for soaking up too much energy. But at the end of the day, I think people. [01:42:00] Real will recognize the benefit that these operations provide and have provided over the last five years, particularly, um, and we'll get allies.

And that's how you solve these big problems. It's not by going to the government and saying, Hey, fix the energy sector. It's like going fix to get yourself, having the people on the ground, seeing the benefits of that. And then when the bigger battles come, like those are going to be the people that, that stand up and say, no, you're not taking this from us.

Mm hmm.

**Aleks:** Mm hmm. Mm hmm. Yeah, man, totally. So anyway,

**Marty:** We've gone over time by like 20 minutes. I don't want to keep you too long.

**Aleks:** Nah, it's all good. I think, um, I think we nailed it. So we, we hit the AI stuff. Um, we hit energy. Um, I'm all out of

**Marty:** comments. AGI is a red herring, uh, to control speech. Um, uh, opening eyes of the world are, uh, overselling what they can do and reaching [01:43:00] limitations.

Totally. World of a thousand minds and making sure that speech isn't controlled. It's probably important. Energy is important and we can fix it. You can fix it. That's the message I want to get through to everybody. And what I said on stage in Missouri last week is like, stop waiting for permission. You have the tools at your fingerprints, just go do it.

Pick up the phone, figure out how to get your introduced to somebody that builds ASICs that you can acquire, get on the phone, call a contractor that knows how to build, um, uh, a site next to a substation, can plug in transformers, can plug in wires. Like, like you said, it's simple. It's not easy. It takes a lot of coordination and learning, but it's, the blueprint is there.

It's just getting your ass off the couch and actually doing it. I

**Aleks:** was literally about to say that. It's about getting your fucking ass off the couch. That's it. Um, yeah man, um, thank you once again for having me on brother. Um, really appreciate it. You know, if people [01:44:00] want to go and check out, uh, spirit of Satoshi, um, I'm going to say the domain name, right?

This time it's spirit of Satoshi dot AI for the love of Christ. And, um, and yeah, the, the energy edition. Uh, it's going to come out for Christmas, basically Christmas, uh, shipping. And then, um, by the time people hear this podcast, um, it should be up available for pre sale, which I think the pre sale is going to come with 40, 000 sets off the press.

Um, so I think probably do a code either Marty or energy, one of the two, and people can go on.

**Marty:** Go pick it up, Freaks. Go check out Spirit of Satoshi. It's really cool. Thank you for building it. Thank you for getting your ass off the couch.

**Aleks:** Thank you, sir. My ass doesn't, uh, like to sit on the couch.

**Marty:** Alright, that's all we got today, Freaks.

Peace and love. Okay!