

(cleaned) Participant 1 and TE Study

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SUMMARY KEYWORDS

token, work, team, engineering, people, economy, crypto, field, system, economics, constraint, good, ai, sense, questions, cryptography, projects, space, engineer, build

SPEAKERS

participant 1, Nathalia Scherer

Nathalia Scherer 00:00

Questions and yeah, just you are welcome to withdraw from any questions. If you feel like and add this interview should take around 45 to 60 minutes and it's also going to be recorded and transcript. Is there any questions you have

participant 1 00:21

for this? Recording on the transcription? What would it be used for? Again, like and then like who How would it be distributed?

Nathalia Scherer 00:30

Yes, so the recording will only audio files will be stored and the transcription will use to help us during the analysis. And the recording will be available for future studies for people that want to take a look at the data set and draw different analysis from the interviews but if you don't feel comfortable with that, we can mark you as an opt out of the persistent storage and just have your data for this analysis.

participant 1 01:04

Oh, yeah, I would like to opt out, just because I don't know how to be used for and then like, for this particular now, as I was reading through the link, I think it'd be anonymized Is that right or something? So I just want to know why sign up for

Nathalia Scherer 01:21

you can either choose should be anonymized or to have your name included and in the research, so we'll be asking every participant by the end of the interviews, how they would like to be mentioned in the analysis if there is a mention.

participant 1 01:41

And yeah, so that's, yeah, that's not store it for now. And then let's follow anonymized data as the data point.

Nathalia Scherer 01:50

Okay. And, and if you choose to, to have it stored, anonymized, that's also an option. Okay, and we can scrub any other names. You mentioned, as well, you know, like mentions of projects and other names. So, let us know if that also would make you more comfortable even for the analysis itself.

participant 1 02:18

Yeah, because I think I just don't want to know is like what the end product might look like. and whatnot. So I prefer opting for like more conservative, but then like, but we can get started and see how that goes.

Nathalia Scherer 02:32

Okay, thank you so much. So start the recording, recording in progress. Can you share a little bit about your personal journey of how you got involved in your field of work?

participant 1 02:50

Yeah, sure. I started around 2015 or 16. When we heard about like, I first came across like crypto was like internet of money moving money on internet like, internet packet. I was studying history of the internet, a lot of computer science, stats, finance, and game theory at a time and then it's just right down the alley. And then there have been just going down the rabbit hole ever since then. And I think around so I've worked on many different things on like smart contracts and blockchain VM, p2p networking and system. And at some point, I realize like there's a lot of people telling you about promises and what they can do. But in the end of the day, it's like a lot of that is just like stories, right people I can tell you a lot of amazing story about a potential technology, but one big missing piece is like, how can you piece together different parts of the system right to life so that the system can do something to achieve its goal and under different kinds of constraints. And that's kind of how I started working with different community and ecosystem, learning about like crypto economics, simulation, and then like diving deep into like, what each protocol is doing and how they can collectively work together. To serve a common goal within its system.

Nathalia Scherer 04:15

Thank you. And can you tell us about your role and what Yes. In doing currently,

participant 1 04:24

yeah. So I joined \$name\$. So I lead the design for \$name\$. Worked pretty close to \$name and team that's how we got close to like the team there as well. And right now I lead \$name\$, which is about 10 plus people now 10 People now and then why we focus on like all the research r&d around like incentive, all the way from like designing protocols to like, validation of protocols to like analytics and then governance of an improvement of protocols. So right now, not only we work on File coin, but we also work on like other ecosystems.

Nathalia Scherer 05:06

Thank you, So, the main question for this study is the understanding the definition of token engineering. So how would you define token engineering? Um,

participant 1 05:20

I I would think like, I'm, in some sense, you're kind of like, building the infrastructure of an economy, right? A bit more like nation states, right. And I think like, this view is so early stage that even sometimes we work with different projects or different teams or different economies. People might not be fully aware of like, what the goal of the economy is why why why is there an economy here? And then like, what is the purpose of the currency, what's the purpose of the currency? And sometimes people are not even on the same page of what the economy wants to do. Right now. Maybe if people agree on some long term future about what the economy wants to do, but people disagree on that. What do we do now? And then what's more important, right and, and also, there's maybe sometimes a lack of appreciation of all the different constraints, because you can say, Oh, we want all of that. But then it's like, sometimes you don't get all of that. So I think a big part token engineering, it's really, really, I think, there are a few folds, you can start from the very macro level of articulating what this economy is doing, why there is a token and what is the purpose of this and then like, what are different ways that like this, the exchange rate of this token might appreciate or depreciate and a what are different ways that like, there's more there's more like that's that's the economy or exporting some useful goods and services with the outside world what are some way that like people might demand more of your goods and services. Right, that's one of the macros on the macro side of things of articulating what the economy does, and how the different parts fit together. Right and and then the other piece I think it's more on like the tactical right, which is like okay, cool. Well, if we're lucky, we know what you want to do right that's it's already rare in the first place. And then given that and then it'd be like, oh, so what about like, what are the different like constraints right like that we can or cannot achieve right? That's kind of where the cryptography comes in. distributed system comes in like Operation all sorts of other stuff comes in, right? Like even all the stuff that we know, as our limitation today. How can you and all the different sub system within the bigger economy, how do we piece them together? Such that collectively is still working towards this goal.

Nathalia Scherer 07:47

Where we can say that is that token engineering is solving that other fields are not solving maybe other fields that are similar to token engineering somehow, is there a specificity?

participant 1 07:59

Yeah, so I think depends on what fields you're talking about. I think like, I personally, don't think token engineering is that different from any of the more traditional disciplines, right, like, it's maybe the difference the difference is really like Okay, so now we have a lot more constrained more specialized knowledge and wanting to acquire with regard to like cryptography with regard to a distributed system, right. And maybe as your system evolved, we have to figure out how humans collectively make decisions. Right? So you get into a bit more about like political science, right? Sometimes you look back in history of humanity of how we create different kinds of social construct, like I don't know like interest rate, or like, that's all like, different kinds of stuff to [life or]. So you, you really have like a very broad base of stuff. That kind of like, all intersect at the token because in some sense, that's like the vehicle where other community comes together and behaviors get incentivized or dis incentivized but I don't love the fundamental building blocks. I don't think they're that different, which is like, okay, so your network or your economy needs to be if you want to be sustainable, there should be some kind of product market fit. So you actually borrow from like traditional, like, very, like web building products, who are your user why people want it. And then how do you grow volume right that there's one but there's a bit of that right. There's also a bit about like, okay, so like, we want to design new incentives, right, how people react to it. So there's a bit of game theory, there's a bit of like, differential equation, there's a bit of like modeling or like and, and oh, then how would you know, like how you're, how this token or this economy will behave over time. Then you have the typical life, financial matters, stochastic processes, and so bless you and so on. So like, it's like, even though it's a new field that require like maybe previously people wouldn't thought right, like, like you need to know a bit of cryptography and a bit of like math or like, but they're actually very interconnected, right like and but you're we're actually just leveraging on a lot existing knowledge of like how human design very complex systems and like and then in some way you try to figure out what works and then like, be very, like first principle and practical about it.

Nathalia Scherer 10:32

You started touching already on areas of knowledge that you consider important, but can you expand on that? Is there any other areas you would like to add?

participant 1 10:42

Um, yeah, so there's more stuff like um, I think like on my team we have a lot of, like physicist like people work on like, particle physics or like, thermodynamics where I think that has been very useful in because it's like, you think about like, how do you given other local rules and like the local forces right, how do you have global emergent behavior steps has been very useful. We have people from the reinforcement learning background to early thinking about like, how agent will react given the policy and then like iteratively what agent might adapt and then a how [domains where] if the system right, so So I'm also people coming from the more traditional finance, hedge fund background, right. So this is also relevant to the study.

Nathalia Scherer 11:32

Thanks. And can you share a little bit about your daily work routine? What are examples of typical tasks rituals, processes that you have to do your daily work?

participant 1 11:43

Um, so we actually have gotten like pretty full service as I mentioned, like we start from like protocol design so like sometimes we'll be like looking through like different design from different like teams, given the different problem that he will have right like so we brainstorm what the design might be. And then like, from there, we go to the validation which is like, how do I know design is good, right? What are the metrics do we care about like, let's like, how do we know it's good, right, like and there was some constraint Are you sure the proposal that we come up with it's like let's say it's implementable, or let's say It's like, it's like, practical, right, like, and then and then from there. We do like simulation modeling to understand like, how the different parts fit together. And then from there, we try to build where we also work with teams will actually build the products because it's like at some point being token engineer be like Oh, we can do all the math and modeling but like, we might as well do it too. Right? It's like, otherwise, it's just like in theory, right? So we actually also do all of this stuff as well prototyping or like working engineers. And then from there after that, okay, so like you have a life. You have like a live network, right? Like so how do I know how well the economy is doing? So then we also invest a lot in analytics in data. And then to understand how network is doing and then we work with governance. And then also like, sometimes you look at the data, you also gain more insights about what you can do and then you also paging in to all the advances in like cryptography distributed systems is constantly thinking about what are some new forms of economy that could emerge that weren't possible let's say like a few months ago, or like a year ago right? So can we do something to really further further the entire the entire industry beyond even token economics? So it's a combination depends on which card you draw on the day and then that's the task that we do.

Nathalia Scherer 13:45

Yeah, amazing. I appreciate the level of detail of every step. What specific tools do you use in your daily work? Maybe in tools?

participant 1 13:56

So I think like, different folks use different tools. I think we're pretty much too agnostic. In terms of like, sometimes people just write like in Latech and formula or sometimes we simulate in like Python sometimes simulate in like jacks or like someone use MATLAB on the team someone use R so that we are not super married to the tool that we use.

Nathalia Scherer 14:20

Can you give two examples of polar opposites token engineering projects you have worked on

participant 1 14:28

a polar opposite in what way

Nathalia Scherer 14:30

and in weight and maybe in the purpose they had or on the type of work that you had to do to create those economic systems or just in any in any way that you might think if you had like different experiences with projects that you worked on.

participant 1 14:58

Right? So I think like, maybe not so much, because I feel like we we try to create some kind of framework to like help people articulate what they want, right? Like maybe people just defer to the level of like, how much they know what they want. Right like, and then like, I think what we will usually and maybe the people differ on like, I think it's very common for team to say, oh, I want like XYZ XYZ and architect give us all the details rather, but they might not be the most important detail to start off. Right so helping teams to align on like that, in some sense. There's a topological order of what are the most important thing that you should ask questions first, right, like so. Maybe teams differ largely on their spectrum, which is like some team might say, Oh, I have lots of like, tactical ideas. I don't know which one is good. But then we'd be like, Oh, no, no, let's not even talk about tactics for a moment. Let's talk about strategy, right? Like, what is your goal? Was it What's your constraint? What do you really, really want and can you really measure it? Right, like so these are kind of like people and then teams differ from like, some teams would come to us with like, pretty clear idea what they want. There'll be gray, right like that will make our life a lot easier. And then some team will be like, oh, I want this I want that. But then we realize it doesn't seem to be the most significant. What about the other stuff? So that's kind of like the difference Wow, yeah.

Nathalia Scherer 16:29

There's a whole process just before even getting started, right? Yeah. Yeah, we'll move to challenges and needs. So what challenges have you faced in your work personally? Um,

participant 1 16:44

I think a lot like about like, capacity constraint? Well, I think like, um, it's like, I think there are twofold as well on the supply side in the sense that we have been training a lot of people into this field, but I think there is still very strong like demand for like, people understanding system and being able to perform the full, full range of service that we talk about so we're constantly looking for talent. And then like training people into the space, I think we have figured out some kind of recipe that like, we hope that we can play people up to their strengths and really get them immersed into like the forefront the frontier of like web three and crypto and token engineering. That's one and then on the demand side, I think like greater appreciation of like, what, what we are doing right in some, I mean, it's very common, because oh, all these economists you guys are just like meddling with the free market. Right? Like, I think it's a very common thing that there's like some kind of claims like that. But then at the same time, where like there's no in some sense like I don't think it's mutually exclusive. Right. I think we were just setting up the structure of a system. Whether it's a free economy or not, that's kind of like a like a orthogonal discussion, potentially. Right. Just like people sometimes consider Bitcoin to be like a free market. But then like, technically there is some crypto economic rules on the very beginning, right, like that set up the structure of the system, right. So in some sense, what we're doing, it's like really setting up the structure. And then like, then we are pretty much laissez faire, right? People do wherever they want. And then like, that's the whole point of like crypto and web three

Nathalia Scherer 18:17

and you share some of the common pitfalls that you face as a TE practitioner.

participant 1 18:25

I think that what I think there's a few things I saw a lot is I think people sometimes getting too much into the weeds of discussion without learning on like the higher level stuff. That's one and then the other one is like, there's a lot of, I think people in general very passionate about different belief in ideology and like different things. So sometimes people just get sucked into like that ideological debate and all that like really existing notions of people may not be like open minded enough to understand, understand and rebuild thing again from first principle.

Nathalia Scherer 19:02

Interesting, and what do you see as the most pressing needs for the token engineering field? To address

participant 1 19:11

I think building more successful examples. Yeah, because I mean, to be honest, right, it's like and also some and also like being, I think being stronger in our collective engineering capacity. So the reason why I say that is okay, first why we need stronger collective engineering capacity. It's like sometimes we think like oh, we build like a great token a great model, right? But then like keep because our limitation in building it out, right? Like we couldn't actually just test it ourselves or we may have to waste a lot of cycle convincing others to do so. Right like that's kind of a one. And, and the whole web three space is very engineering driven. Right. So I think as a community, I think we should I mean, a lot of us came from like math, finance or economics background, but I think like we should invest more people who are more hands on and then can actually build, who shared a collective understanding of like, Oh, that makes sense, right? But then can we also build that very quickly? And then the other thing is like, it's not just to our community as like, let's say it community but also just like crypto space as a whole, which is that there aren't that many really successful crypto projects that have like, real product market fit, right, like beyond the speculation, I think very, very few. So can we, I think like the space evolve in some kind of like a new project came came around and then like, it really makes a difference, really, and then people start realizing, oh, okay, things can be done in this particular way. And then that's kind of where, how we move the space forward. And then Oh, actually, there's the actual good token. is possible, beyond like, just like, whatever people come up with. Yeah.

Nathalia Scherer 21:06

Maybe we'll move to the ethics or, and can you describe the role of ethics and token engineering?

participant 1 21:17

Yeah. So I think this is a great question. I think that there are many different angles to this. Well, I would think like, at least for my team, we emphasize a lot online integrity and then like, and transparency so basically like, again, like you are designing the economy of them affects many, many different individuals. So I think there's like some level of like, we need to disclose rather what like what we know each had a level of understanding of like the entire ecosystem, right? And then at the same time, the challenges we may not know everything, because it's economics in HR. I like we can say, Oh, we think this might happen, but we are not very sure. Right. So I think there's a bit of a challenge there. And then the turn but we also we are really like just embracing there. I think one of the culture on my team is like really open communication. Because no one knows for sure, like whether you be right or wrong, but if you disagree or see something right, everybody should feel empowered to just like speak up and then like say it so that is that we also really believe open source. A lot of the model that we use are like open source viewer to like make their own tweaks because we don't know our assumption could be wrong. People should feel free to make their own as well. Yeah, but I feel like there's many angles about it, but these are some of the stuff that just like first came to my mind.

Nathalia Scherer 22:42

Is there any ethical concerns you have regarding token engineering? Um,

participant 1 22:49

can you give me some examples?

Nathalia Scherer 22:52

And, like, do you I don't know if there's something you think that could go wrong. And token engineering if, like, for example, some of the values you shared or not put in practice? Is there any anything you see in the field that concerns you in the way things are operating? That you feel like this keeps me up at night looking at it?

participant 1 23:22

Not so much. Maybe I'm not fully aware what other people do in this space. But at least within our team, I think like I mentioned my high integrity, very transparent and open, open sourced at the same time like we don't we try not to recommend anything to the extent that like, we're just presenting analysis and opinions and then like, it's up to the community to decide what they want to do.

Nathalia Scherer 23:46

Do you have thoughts on how to increase diversity and inclusivity?

participant 1 23:52

So actually, our team is actually pretty diverse. We have like people of colors and then like, I mean, I don't know I feel this we get into like some PC territory. But then like, we also have like, woman on our team, and we also like constantly trying to like, That's my philosophy right, I believe in meritocracy, so that wouldn't try to like hire someone just because they are more diverse. But then just by the fact that we try to hire people who are the most capable for the job, We actually ended up with a very diverse team, both in terms of background education, prior experience, racial, race or like gender, even though I think we can still do better on the gender part.

Nathalia Scherer 24:32

Thank you. And we're also trying to understand what are the incentives for practicing token engineering? So what would you say are the typical rewards in terms of value and form that someone receives for participating in the field?

participant 1 24:49

I think it's very fun. I don't know about you guys, right? It's like name me the field I mean, it's like this a field that like you already. First of all, I have a bird's eye view of the entire system. Right like and then you are always learning. I think it's important to allow people to you're always learning and then like you're always thinking about the system and from a holistic perspective and understanding how things are evolving. And then like providing like experiments simulation and like ideas of how to improve the system. How do you know whether you're already improving the system right. So I think there is an intellectual element. That is like very exciting for a lot of people, right? Like, if it's like you take the similar disrupt claims that like, I mean, to be honest, I think like someone like a quant researcher at hedge fund, if they if they're, if they are down the rabbit hole, they might be a pretty good crypto econ person too. But then it's like comparing to the job that they're doing at a hedge fund could be very repetitive. Versus like, you're actually working on stuff that really matters and move the needle and have to learn so much new stuff every day. I think that in and of itself is like a very good driver.

Nathalia Scherer 26:05

And this is something we're asking everyone, what are the average salary of a token engineer?

participant 1 26:12

Um, I don't have a very big enough sample size to comment on that. Yeah.

Nathalia Scherer 26:19

Just from your experience, because we've been having quite a wide range of where people were compensated for participating in the field. Just an, do you have an estimate of how much someone with the title of a token engineer would expect as a salary?

participant 1 26:40

I don't have a good estimate. Yeah. Okay.

Nathalia Scherer 26:43

Thank you. And how do you perceive the financial reality of the space in terms of resources flowing in it? Um,

participant 1 26:56

I think there's still a very strong demand for token engineering. as a whole so I was thinking like there's actually like pretty good demand and interest and resources flowing through but the thing is, like people also need to upskill I don't know like it's like you need to deliver it right of like what people in some sense, I think it took engineering job. It's like very demanding right? Because you need to know math, finance, economics. And then you also need some time into like participating in governance and then like you need to like, there is some like political science element here as well. Right like and then if you really want to go further, there's also the need to get better at Operation building products. Understanding what works, what doesn't work. So it's actually a very demanding thing. Right. So I think I do think there is very strong demand just by like, we do have many other teams reaching out looking us looking into looking for help from us. So that's why I think there is strong demand but at the same time we also had a previously we had a very hard time hiring as well. So I think there'll be a mismatch between like, what the job requires and the skill set.

Nathalia Scherer 28:04

Thank you. And what do you wish for the future at the field how do you see it in three years?

participant 1 28:16

Yeah, so I think like we could institutionalize a lot of the knowledge in the field so that like, when different teams do want to design a new token with or without involving a token engineer, where at least communicating and the right lingo and then people unders, is like in some set everybody took economics101 in school, but people will still get all that kind of many of the economic concepts wrong. I think that's like that's the thing about token economics sometime is that people all feel like they should know what's going on. But then sometimes there's there are many, many nuances well, how can we articulate like how our system work? Where all these like common like, and non intuitive behavior, and so on, right? I think like just broadening this education so that more like different other stakeholders have a better appreciation right, like very typically, we see will be like, maybe like the founder of a project will have very good intuition. But then like, you may not see that because like as a founder, you have very a very high bar to some extent, right. You need to know the technical you know the business right and you know, all the other stuff going on. But then like, What about like people who are not necessarily on their founder level but then like, Well, very good engineer or could be like very good, like, bizdev person could be like working on a project or something. How can we get more of these more of these people to appreciate the field and understand like the work and nuances involved? I think that will go a long way

Nathalia Scherer 29:49

to creating education and awareness for the future. Do you have any specific developments or innovations you'd like to see?

participant 1 30:00

You mean innovation or in terms of education,

Nathalia Scherer 30:04

in terms of token engineering in general, or education?

participant 1 30:09

I think token engineering as I mentioned earlier, I think I want to see like more tokens that are experimenting with more. I feel like right now I think my understanding a lot of the research is still being constrained by what was done in the past. Like, we haven't seen that many like very novels stuff going on. So I think I would think part of what limit us potentially is like us, as an ecosystem we might want to have more engineering capacity, such that we can short term the time between like, Oh, here's a research of like, a new idea to like, oh, it's already alive and running and people are using it. Right. So that's, I think that will actually make a bigger difference. And then and then like in terms of education, we haven't we haven't really cracked that yet. We are working on it. So that's something that i would love to like collaborate more, I think like to how can we like educate the broader ecosystem better on like token engineering economics and like, systems?

Nathalia Scherer 31:13

Okay, token Engineering Academy has been doing a great work with us, but I think there's so much more space for education still, that is coming. And as AI technology continues to advance there is a potential for it to significantly impact the development of TE. In your opinion, how do you see AI affecting the field and what would be your role in if any?

participant 1 31:42

Oh, I actually think, so, We're working on some new projects that actually work on like that intersection of AI and crypto, right. Like I'm just more ideating and I think there's still something there. And I don't think I'm I'm not super I'm super worried right now. More so because like we actually use AI as a tools to enable our work. But I think like given how like the less I'm assuming AI but AI we mean, most of the larger language model given how like the model is trained or like, very likely would just be a regurgitation of the text corpus corpus input, rather, but that's not where the meat is where the meat is like, oh, so like how do you like, what's the goal? What's the constraint? How do you like build a system around it? So I think there's still significant work. And because many of this work, it's like, in some sense, involve humans. There's a human judgment element in it as well. Right, but I do believe I think there is some interesting at the intersection of AI and crypto that I think is like many people are exploring right now as well.

Nathalia Scherer 32:49

And we're almost closing it just the last question, whose work do you admire in this space and who would you recommend we talk to next?

participant 1 33:01

Yeah, so many of our my work and like my education was informed a lot by like \$name\$ at \$name\$ \$name\$, so I think I'm sure you guys are talking to him. And then like, i think on our side. We also like host like \$nam seminar. Which is a seminar within our group, I think like the there's an external speaker coming today. I think he's quite famous to within this space is like \$name\$ from Princeton University. So he published some work around like, consensus protocols or like selfish mining and then in like, Bitcoin in the Bitcoin mining space, so I think there will be he'll be a good person who is deeper in academia and they will offer you more many interesting perspective as well.

Nathalia Scherer 33:46

Would you mind typing his name here in the chat so we don't miss it. And you said he's coming to a seminar you guys are hosting today.

participant 1 33:57

Yeah. That's right. Let me see.

Nathalia Scherer 33:58

Thank you

participant 1 34:22

if that's all then yeah, let me know if there's anything I can help. And yeah,

Nathalia Scherer 34:27

yeah. Is there anything else you would like to share with us?

participant 1 34:33

Not at the moment, but I happy to like take a look at the report. And then we can also decide how we want to like do the do the anonymization and whatnot then as well.

Nathalia Scherer 34:43

Thank you so much, that was very insightful to to hear you.

participant 1 34:47

gabions Thank you have a good one. Bye. Bye. Bye.

Nathalia Scherer 34:57

recording stopped