1:32

Alexey

**This week, we'll talk about freelancing and working at a startup. We have a special guest today, Antonis. Antonis is a freelance data scientist who is currently working at Nanometrisis, which is a startup that focuses on providing software for nanoproducts inspection. That sounds really cool. In addition, he recently joined a freelance platform called Upwork, where he offers a range of data solutions to clients. Welcome to the show.**

2:00

Antonis

Hi. Thank you for your invitation. Nice to be here.

2:05

Alexey

**Yeah. And what I did not have in the script, but Antonis is actually a very, very active member of the DataTalks.Club community and it's a real pleasure for me to have him here today. So thanks for joining us today. The questions for today's interview are, as always, prepared by Johanna Bayer. Thanks a lot, Johanna, for your help.**

# Antonis' background

2:28

Alexey

**Before we go into our main topic of freelancing and working at a startup, let's start with your background. Can you tell us about your journey so far?**

2:38

Antonis

Yeah. I will start with my Bachelor's. I studied applied mathematics and physics. That's my main degree. Actually, I also focused in the physics direction, so I graduated as a physicist. Then I continued to do a Master's in Greece – so a Master's and Bachelor's in Greece. That was on nanotechnology. There, while I was doing my thesis, which was around 2017, I started working with data science. It was because of my thesis.

After that, I went to the Netherlands to join a program that's called a professional doctorate in engineering. For this program, you work for a university, which sends you to do projects with companies around the Netherlands. So you do this project, you get exposure to industry, and you also get modules and training from the university. So it's a kind of a combination of [cross-talk]

3:47

Alexey

**As a part of your education?**

3:50

Antonis

Yeah. It's education and work in the same program. The first year you work as a kind of a consultant for a company, doing small projects, for like four or three months. Then in the second year, they send you to do a one-year contract with a company. You work there, you provide your solution to their problem and you also get the training. You need a specialist from the university. After that, I became a freelancer in Greece, after I came back to Greece. My first job was actually the reason why I came back to Greece, which was for the startup called Nanometrisis. As you said, what we do is build software for companies who are building nanoproducts. We help them inspect those, because there is a lot of complexity there.

If somebody doesn't want to invest their money or the time or a team on finding these metrics that characterize nanoproducts structure, since it's very complicated – if somebody doesn't want to do that, we offer them our software, which can lift this kind of burden off their shoulders. While I was doing that, because I was technically a freelancer in Greece, I joined the Upwork platform, which is for freelancers ,where I provided solutions for machine learning data science. That's what's happening right now.

5:27

Alexey

**That's a cool journey. So what are those nanoproducts? Is it related to electronics, like phones and stuff?**

5:35

Antonis

Yeah. Actually, one of the nanoproducts (or clients) that we have is building surfaces in the nanoscale. You can't see it with your eyes – you need a special machine to see them using electrons. So it uses electrons and not light. These surfaces are the base for the chips that we use in our phones and in our laptops. Also, apart from that, there are some edges, like those we have for razors.

Even the edges of the razors have to have very specific roughness on them so they can be effective and cut only the hair. Then there are also nanoparticles, which can be on the creams that we put on our face, for example. So it has to have specific sizes. So there's a big variety of nanoproducts and it's still growing.

6:39

Alexey

**I only knew about the chips part. But I had an idea about razors and nanoparticles. That's pretty interesting. I never realized that razors are such a complex thing. I always saw them as just a sharp thing that you use to cut hair. [chuckles]**

6:58

Antonis

Yeah. It's very complicated and there is a lot of science behind it.

7:05

Alexey

**I know that Phillips (the razor I use) is a big company in the Netherlands. Did you get an exposure to these things at Phillips? Did you work at Phillips in any way?**

7:20

Antonis

No. Not in Philips. Other people did. I had other companies like [inaudible], which also like a spin-off from Philips. But they were people who did projects with Philips.

7:40

Alexey

**I heard about programs like the one you had, and usually Philips invests a lot of money into these kinds of things. I think one of the universities... Did you study at Eindhoven University?**

7:52

Antonis

Yes. Yeah, in Eindhoven. Actually, it is from Eindhoven and it's also a joint program from Delft... and I don't remember the other company.

# The pros and cons of working for a startup

8:07

Alexey

**Anyways, you finished your program, you came back to Greece, and you decided to work at a startup. So how did it happen? Why a startup? Why not join a corporation?**

8:19

Antonis

Yeah. I had an opportunity to either work for a corporation (kind of a corporation, it was the SNC company). I had the opportunity either to work there or to work at the startup. Both offers were around the same time. After I graduated, I finished the program and had a lot of time. I was doing interviews, and I had rejections throughout the process. Then had those two offers at the same time. So I was thinking in my head, “Okay, what do I want?” I had to stop and think for many days. I decided that I would like to try.

I was admiring the entrepreneurship journey in creating something innovative and boosting the market and seeing how it goes, getting feedback – all these parts of the startup. I always admired startup stories. So I said, “Okay, I'm gonna do it now. If something doesn't go well, maybe I will have other opportunities to go to a corporation.” Also by the way, the startup was doing what I was doing for the Master's and I would do something in data science, which I don't think would be very easy.

9:54

Alexey

**So in your Master's, you were doing some nanoproduct stuff already? [Antonis agrees] Okay. So it was quite related. You were interested in these nanoproducts, you were interested in data science, and it was two of those things together.**

10:16

Antonis

Yeah, yeah.

10:19

Alexey

**Okay. That's pretty interesting. When you were deciding between a startup and a corporation, I think there were probably also some good things about joining a corporation, right? Did you do some sort of comparison? For example, when I need to make a decision, sometimes what I do is list the pros and cons and then I see “Okay, there are more pros here than cons.” And then that's the decision I make. Did you do something like this when deciding?**

10:48

Antonis

Exactly. I did it exactly like that. I also didn't tell anyone about this. So I cut off everyone's opinion that may have affected my decision. It was just me and myself, let's say, and I was trying to balance the pros and cons. You definitely get some pros from working for a corporation and some cons as well. Eventually I said, “Let's try the startup direction.” I thought they would give me some more value. In the future, I will go back to the corporate environment and get something there.

11:30

Alexey

**Or maybe the startup will become a corporation.**

11:32

Antonis

Oh, yeah. That would also be a good outcome. [chuckles]

11:39

Alexey

**[chuckles] Okay. Do you remember what the pros and cons were? For pros regarding working for a startup, I think you mentioned creating something innovative and other things. Do you remember, what were the other things you put when deciding?**

11:56

Antonis

Yeah. I think when it comes to a corporate environment, although there are always exceptions, you're kind of more focused on the job that is in the role description. But in a startup, you might take other positions as well, because there are not so many people. You may have to talk to clients or you may have to do the branding, meaning you have to make a video about your company. There are so many things that might have been somebody else's job in a corporate environment. I think that some people can consider this a con and others may think it's a pro, depending on what they like to do.

12:52

Alexey

**For you, was it a pro or a con?**

12:53

Antonis

For me, it was kind of a pro. I wanted to have the ability to go a bit into the business so part of it as well, or other aspects of it – to control them.

13:08

Alexey

**Do you actually need to record videos now?**

13:11

Antonis

No, I haven't. But I built a website. Some people in my company have made videos – recorded them and posted them, for branding. I also think another pro thing that I want to have in a startup is to be more organized by nature – that is, you have to be more organized in a corporate environment. In a startup, you have to do that yourself.

Maybe it has to do with accountability as well. You yourself are accountable for that, while in a company, it's easier to be somebody else – you have deadlines from your manager or your team, but with a startup you set your deadlines yourself or maybe your clients do. It depends. That would be something different as well.

14:23

Alexey

**How large is the company where you work? How many people work there?**

14:30

Antonis

We are four active people.

14:34

Alexey

**Four. Okay. That's a pretty small startup.**

14:39

Antonis

Yeah. [chuckles] I don't know. I've seen startups with two people. [chuckles]

14:46

Alexey

**Well, there are startups with one person, right?**

14:49

Antonis

Yeah, that's true. In the accelerator that we have, there were some that were just one person building cool things.

15:01

Alexey

**So four people. If you're one of these four, you have to do pretty much everything, right?**

15:07

Antonis

Yeah. Now we were in an accelerator and were getting a lot of business. We were developing a business acumen, let's say, because we were coming from an academic mindset. Nanometrisis started as a spin-off from a research center in Greece. So I had to get this kind of knowledge and learn how to translate it to the company.

# Useful skills for working at a startup and the Lean way to work

15:41

Alexey

**Since you joined, what kind of new skills have you learned working at a startup?**

15:49

Antonis

I think communication – how to be better at communicating with the team. Because I was not the only data scientist. When I was building something, I had to translate it using not too many complicated, technical words to other people. Also, maybe to some clients, or managers, or CEOs and other clients. So communication skills, definitely. This was just an example. Another thing for me was business knowledge. I'm still learning. I have a ways to go. Because, again, I am accountable for myself and for the client.

I have to increase the quality of my product. My code still is not on the level that I want, but I'm working on it. There's a lot of learning. You have to be able to learn things on your own. The other thing that I was talking about, and I posted a blog about it – being lean. That was a big thing for me. The lean way to work.

17:36

Alexey

**What is a lean way to work?**

17:39

Antonis

It comes from the fact that we cannot make very accurate predictions of something that we will publish, or how it will go. So we build the product and that product is built on assumptions. If it's physics or maybe you want to send something to space, I know it's very complicated, but the rules can be predictable. There are masses and you can write some things in the notes and predict where it will go in space within the next second, for example. Of course, it's complicated and has other parts as well. When you launch a product, or even a new remodel, you have to do this based on assumptions. And you have to test – that's the thing, you have to test them as soon as possible. From the test, you get feedback – this thing worked and this thing didn't work.

I made the prediction that my site that sells cars – I'm trying to push more red cars to sell them, because I think people like red cars more. I have to test this. This is my best idea right now – my innovative idea. I try it out, it doesn't work, so I have to pivot and try to do something different. This is the lean way. It's based on the circle, where you build something, you measure it, you learn from it, and then you build again and you do this in a loop. Again, you cannot know and you cannot predict everything.

19:35

Alexey

**So there is an idea and you think that this idea is going to work. You need to find a way to test this idea, right? And then you need to have a way to measure the effect of this idea. For example, “Do people really buy more cars if we have more red cars?” Something like that. Then you see “Okay, indeed. People buy more.” Or nothing changes. This gives you some idea of what happened so you can either change your assumptions or maybe develop them. Is that right?**

20:05

Antonis

Yeah. You develop them further. I used a startup example, but it definitely goes well with a machine learning process or a data product.

20:25

Alexey

**It seems like something that will work in other environments too, not just at startups – corporations too.**

20:34

Antonis

Yeah. I think in the end, that's something that they do. Actually, even the book that I was reading about this – The Lean Startup – it said in the beginning, that this is not only for startups. It's for everyone. For companies...

20:59

Alexey

**For life?**

21:00

Antonis

I mean, yeah. Maybe life. [chuckles] In machine learning, you make assumptions when you publish a model about how it will go based on the training dataset that you have in the testing. But then when you publish it, things might change. One aspect that people are seeing and discussing a lot right now – you have it in MLOps course – is the monitoring. There, things drift. You have data drift or concept drift and you have to monitor them to see whether your model or the assumptions change. You have tools like Evidently AI that can definitely be useful to have.

# How Antonis joined the DataTalks.Club community

21:54

Alexey

**For those who do not know, Antonis is talking about the MLOps course, which is the free course that started last week. We are still on module one and by the time the recording is out, we will probably be on module three, maybe. You can check it out. I think there should be a link in the description to this video, too.**

**I actually wanted to talk to you about that a little bit later, but before starting the stream, I asked you when you joined DataTalks.Club, so maybe you can tell us a bit more about that. You're a very active member of our community and it's very interesting to hear your story. How did it happen that you joined our community?**

22:40

Antonis

All right. I had a friend who was also in the program in Eindhoven, Lena. We were talking about courses and discussing them. I was telling him, “Hey, I want to check out more courses because I think I'm weak on some topics.” And he said, “I know Alexey from DataTalks.Club. You can check it out.” Back then I think it was December, he was telling me that you had the data engineering course. I was like, “Okay, yeah. I'll check it out.” I was a bit late to join, so I didn't join the data engineering course that you had. I also didn't know about the concept of your Slack or the talks that you had. I wasn't sure what it was. As the months passed, I was seeing the talks that you had – the interviews – and I was checking out the Slack more often. I slowly kind of understood what was happening in Slack and the whole community, so I said, “Okay, I will join the MLOps course when there is a chance.”

I really liked it. I definitely liked the fact that people were posting questions or talking about MLOps. It was something that I realized that we didn't have when I first came to my startup. I was actually the only data scientist there, kind of. It was fascinating to see people from around the world talking about data and some new things that are happening. I also learned something new. After that, I wanted to be more active. I saw that apart from being in the community, maybe I could do something of my own, like you suggested, the project of the week.

24:52

Alexey

**Yeah, it's really cool to have you here. It's nice to hear your story. So you tried to do the data engineering course, but it was a bit late. But you did the MLOps one, right?**

25:06

Antonis

Yeah. That was my first one.

25:08

Alexey

**Do you remember what your project was about?**

25:12

Antonis

Yeah. I chose a semiconductor project. [chuckles] I don't remember what I was predicting. There were a lot of features. It was a machine learning model that I think was predicting if a chip is going to fail or not. I'm not sure. I had the opportunity to use MLflow. I hadn't used it in the past. I checked out Grafana with Evidently AI. And I also used Prefect. It was a very nice alternative for me, personally, to Airflow. For me and for the things I wanted to build, it was much easier. I had an opportunity to use all of them together, kind of as you did in the course. It was a great learning experience. Having a project definitely was the best thing in the end for getting the knowledge installed in your head.

# Suggestions for students joining the MLOps course

26:38

Alexey

**Do you have any suggestions for the students who just started the MLOps course?**

26:43

Antonis

Yeah. I think I would definitely suggest doing the exercises in the end. You can watch a video and then you can forget what was done in it if you don't practice it yourself. For me, that happens all the time. I think I know it, but the knowledge part is different from the skill set. Those things are different. Also, have patience. I know, everybody might be very busy, but if you have patience and slowly progress every day whenever you have time, you can certainly make it. DataTalks is very flexible on the deadline. Sometimes I felt really pressured on the deadline, but you extended it by one week. I don't know if I should say that really. [chuckles]

Another thing is to definitely do the final project. Again, as I said before, that was the best thing. Another thing that I didn't mention, where the community helped me – you mention a lot about posting your progress in public or making a post. I couldn't post every day, but I was seeing other people doing that, which looked nice. But I posted my final project and I had a lot of requests – people sending me messages to discuss it. So I really liked that as well. People had questions about *my* project. [chuckles] That was very rewarding as well.

# Antonis contributing to Evidently AI

28:31

Alexey

**That's pretty cool. I know that in the course you used Evidently and then I saw you in the Evidently community. I think you also contributed to the tool. How did that happen? Can you tell us about that?**

28:43

Antonis

Yeah. I saw Evidently and I liked the tool. Then they announced the Hacktoberfest for October. The organization behind it announced it and Evidently itself had some issues posted, where you could do a pull request. I like them too, and I like the whole aspect of it. It fits, as I said before, in my lean aspect of the startup. I said, “Well, let's try it out.” I wasn't sure that I could do something useful, but it's something that I'm trying to follow. Again, I like the community there very much – the people, definitely. I'm learning a lot from that as well.

29:51

Antonis

**Are you still contributing?**

29:53

Antonis

I try to. Yeah. It was a small contribution on a notebook. It was a how-to, as a tutorial mostly. I don't have a lot of time, but when I do, I try to add to it.

# How Antonis started freelancing

30:13

Alexey

**Well, speaking of not having so much time – I know that you work at a startup and that you also take a very active part in our community. You also contribute to open source projects, like with Evidently, and you also freelance. So tell us about that part – how did you start freelancing and what do you do now as a freelancer?**

30:33

Antonis

Yeah, I was working at a startup and I wanted to expose myself more to data science and building things. Apart from gaining the knowledge I also wanted some actual clients for myself, for the data science part, just for me to grow and earn some extra income, if I could. I found this platform called Upwork. It's a platform that allows freelancers – it could be data scientists and machine learning engineers, but it could also be something like web designers. So it's not only for data people.

The platform offers freelancers a spot and also offers a spot for clients. Clients post their job and freelancers see those jobs – they apply all together and see if the client says, “Okay, I like you. Let's do an interview. Okay, you fit. Let's start the project.” The project could be fixed price or hourly. There's a lot of competition, but it's a very nice platform.

31:52

Alexey

**What kind of projects are there usually? Long projects, short projects?**

31:57

Antonis

All kinds. I have a niche – you can check out my dissertation over two hours or something, and there could be a six month project on building a model. Now I see a lot of LLMs there – GPT-related things.

32:26

Alexey

**What kind of projects do you usually go after?**

32:30

Antonis

Machine learning, data science, analytics – those three. There are a lot of those and very diverse – it could be from healthcare, for example. I had a big one from there. It was a kind of text mining. There was one, again, to build a segmentation model. I also had one recently.

33:03

Alexey

**From what I hear, it's more short-term projects – maybe for a week or a month. Something like that?**

33:10

Antonis

Actually, the healthcare project was for three months. The segmentation one that I did was three weeks. I had another one that was very short. But it depends. I couldn't join a very, very long, long one, because I had the startup journey, so I was doing short-term projects. You can choose to put in more than 40 hours per week if you want. You can filter the jobs. But there are long term ones. I just happened to choose certain ones because of the time I can put in.

# Getting your first clients on Upwork

33:59

Alexey

**You mentioned that there is a lot of competition. I imagined that especially for those who are just getting started on a platform like Upwork or Fiverr, or other ones (there are a few of them), how do you actually get the first client with all this competition and with all these other freelancers on this platform?**

34:19

Antonis

Yeah, that's a very good question. You have to, again, have patience. [chuckles] That's definitely the biggest piece of advice. And you have to have persistence. You go step-by-step. First, you build a basic resume or portfolio. Upwork helps you. Upwork wants you to get clients because, even for business-related reasons, they get some money out of all this. So you definitely have support from the site. I, myself, had to watch a lot of YouTube videos of people who work on through the site and were in the same spot as me. I think the first thing is to build a basic portfolio. Try to find some clients' jobs and try to take them. Post as beautifully as you can on why you want the job or what you can do about it.

If they reject you, it's fine. Try to learn from it and why it happened. Improve step by step. For me, it helped a lot. Again, have this process – I didn't get any jobs in the beginning. Then I found out things like I should write better messages to them trying to explain exactly what I can do for them. Also, apart from my message, I started sending them attachments, which I didn't do at first. I built a PowerPoint with all the procedures that I've done myself – not ones that have to do with actual clients. I actually had an MLOps project that I did for DataTalks.Club and I put it there and I had it attached in my message.

In the end, by improving your profile every day, every week, you will have higher chances. You might not get the best client in the beginning, but if you get a small job, you might get five stars. Okay, you didn't get much done, but you got the five stars. Then you get another five stars. Then you climb more and more and more. So it's a process. You have to invest your time and have patience. But I think it could be rewarding.

37:00

Alexey

**From what I heard, it looks like the course helped you actually get clients. [Antonis laughs]**

37:05

Antonis

Yeah, it helped. [chuckles]

37:09

Alexey

**Good. Happy to hear that. So you said that you were constantly improving and trying to figure out why rejections happened. Why do you think the rejections actually happened? Because your profile wasn't complete? Because the clients weren't sure that you can do the job? What was the reason?**

37:27

Antonis

If somebody else gets the job – maybe another person had written a better cover letter or was a better fit for the job, had more skills or had more experience. Or maybe they offered their services for less money. I think it depends. The thing that always helps – maybe something I didn't say before – is to have a specific skill. A year ago, I saw a lot of chatbot people. If you have very good experience in building chatbots, you can focus only on that and get some clients there. That helps a lot. I wasn't that person.

You don't get feedback from clients all the time, you have to ask for it. If you don't get an answer, you can make assumptions. But I always saw this in YouTube videos or the instructions or the advice Upwork gave and I saw that I was not writing a good cover letter or maybe I asked for too much time or I had to have more skills for my resume.

39:07

Alexey

**Was it worth it? It looks like you went through a lot of trouble to actually start getting clients. Do you enjoy working there?**

39:15

Antonis

It wasn't that I was doing only that. Again, for me, it was a learning experience from the beginning. So I enjoyed it. Also the frustration you get from not being where you should be kind of helps you build up until you achieve success.

39:46

Alexey

**You kind of get a push to develop yourself, right?**

39:50

Antonis

Yeah.

39:53

Alexey

**Okay, cool. Now, in addition to your work at a startup, you have a few extra gigs that you do at Upwork, right?**

40:04

Antonis

Yeah. Right. I just finished one recently. It was the one with segmentation that I was talking about. But right now I don't have any.

# Pricing your work as a freelancer

40:18

Alexey

**I've heard that one of the problems with Upwork and other similar platforms is that there are a lot of people who work for very little money and you kind of have to compete with them. How did you solve this problem? How do you come up with the price for your offers – for your projects?**

40:39

Antonis

I'm not able to answer this exactly. This is indeed an issue. I put an hourly, you know, $43 per hour. And I'm trying to follow that as much as I can, depending on the project. If the project is not gonna take a lot of time for me and it's not very complicated, I might lower it. If it's a big corporation, I will definitely put that rate. So it also depends on the client.

Secondly, it depends on, again, me valuing my time. I have my income from the startup and I'm okay. I have a basic salary. So the question is the rest of the time that I have. How much do I value it? If the value is like $10 per hour for a pet project that is not going to offer me something new, (like new skills, for example) then I'm not going to accept. If it's $10 per hour, but it's something that is definitely going to give me new skills and I really like it, I might do it. If it is very good money, I will do it. So it depends on how I divide my time. [chuckles] It's personal.

# The process after getting approved by a client

42:12

Alexey

**So let's say you are at Upwork and you see a nice project, then you probably apply to this project, you send a cover letter, you send a PowerPoint presentation, and then you come up with a price depending on the type of the client. What happens next (after you apply)?**

42:33

Antonis

That's a very interesting part of the process. After that, you might have already done an interview to get accepted, but then another process starts. You start with an approach to the client's problem. I've personally seen that I have to make sure that the tasks for getting to the final solution (or the milestone, at least) that has been decided is crystal clear, or as clear as it can be. So I try to talk with the client about this, and, again, it will depend on the client. If it's a big corporation, it's easier to do that. If it's only one person, it's more difficult.

After the first interview (after getting accepted) you have to do a kind of inspection (a data inspection, we can call it) where you see “Okay, what do they have? Is it true that they have what they said? Is the data that they were saying indeed there?” I take some time and see, “Okay, can I solve it in the way that they asked? Or do I have to tell them how I'm going to solve it?” So you do these more theoretical and less practical parts. Then you have to both agree with your stakeholder (or your client) and then you start doing the actual task. While you're doing the task, you have to create some milestones, “Okay, I did that. This is where we are. Do we like it? Let's move on.”

44:27

Alexey

**It looks similar to what we talked about with the Lean stuff. Right?**

44:31

Antonis

Yeah. Yeah, it's a philosophy. [chuckles]

44:37

Alexey

**So you just work on milestones, then you see if the client is satisfied with what you did, and if they are, you continue working. You get constant feedback from them, right?**

44:49

Antonis

Yeah, that's always what you want to do. I can say it's easier if I can do that myself. There are always some things that are unpredictable but it's okay. I sometimes fail to do this kind of process myself and I try to improve it every time.

45:12

Alexey

**In order to work as a freelancer do you need to register a company or how does that work?**

45:18

Antonis

Yeah. You have to register as a freelancer for your own country so when you get some income, you can say, “Okay, I make an invoice and publish it in the country and so they can bring in the taxes.”

45:54

Alexey

**You don't just go to Upwork, register and start earning money, right? There is some preparatory work.**

46:01

Antonis

Yeah. Maybe you can do it and never get the money in your bank – it can stay forever on Upwork. I don't know if you want that. [chuckles]

46:18

Alexey

**Oh, so if the money is in Upwork, then what are you going to do with this money?**

46:25

Antonis

I don't know. You can actually put it there until... I don't know. Maybe you can do it and then start a company on your own to get the money into your bank.

46:38

Alexey

**First you try to get a few clients and if this thing works out, then you go through the paperwork. So you don't have to take money immediately off the platform.**

46:47

Antonis

Yeah. Or maybe you can do them in parallel, because doing the paperwork may take some time depending on where you are. There can be some delays – various public sector things.

# Wearing many hats as a freelancer and while working at a startup

47:04

Alexey

**At your work, you have to wear multiple hats. We talked about many different things that you need to do, like talk to clients, maybe even do videos – all that kind of stuff. While, here, as a freelancer, you're more focused on machine learning, right? Or do you still need to do some extra stuff as a freelancer?**

47:28

Antonis

I think, again, it's communication skills – the whole process that I described. If you have good soft skills, it will help you because you have to control the whole process with the client. You also have to present to them what you did. Maybe you don't have to really be technical. Again, these kinds of skills are very, very valuable. I think you can, again, connect it with everything – like business. You are your own business. I was thinking about how you value your time, and you have to decide that.

You may have to get business knowledge for yourself. But these are skills that you can learn along the way. You may run into some failures, and you can learn from them. I think if somebody listens to this podcast and makes a checklist, it's not very easy to track all of these things unless you do them. I think you asked before – if you want to start, just go for it, and it will be very valuable, for sure. You'll get some good skills.

49:02

Alexey

**Thank you. There's a question from anonymous, “I struggled to get freelance work. Other than being consistent in the search for freelance work, do you have any other suggestions?” I think we discussed this partly. Iterating and improving your profile was one thing. Is there anything else you would recommend to this anonymous person?**

49:26

Antonis

I didn't hear the second part.

# Other suggestions for getting clients as a freelancer

49:29

Alexey

**The question is, “I struggled to get freelance work. Other than being consistent in the search for freelance work, do you have any other suggestions?”**

49:40

Antonis

Okay, I see. I think it can be a good idea to see what is valuable for the client and for you to get a job. So if you're being persistent and taking a lot of jobs, it will help you. The other thing is to fix your profile every day – try to see what you can improve. If you can improve your profile every day, in one month, you're going to have a very good profile. While you're doing that, I think you can also see where you want to focus your skills, or whether you want to learn something new. While you're doing the search, also learn a skill, or improve your skill set. That's also very valuable.

For sure check out YouTube videos and tutorials from other people in the Upwork community. They will help you, definitely. You can follow their advice. While you're doing the skills, maybe you can build your portfolio – similar to when I did a project from the MLOps course and put it on your GitHub and then put it on your presentation and attach it to your next cover letter. Those are things that I can think of right now.

51:31

Alexey

**So for anyone who is struggling with getting Upwork clients, do our courses and do projects in our courses. [chuckles] [Antonis agrees]**

# Antonis' thoughts on the Data Engineering course

51:42

Alexey

**Cool, thanks. Coming back to what you do at DataTalks.Club. This is something I wanted to talk about at the end. We already mentioned that you took part in our courses. You also recently finished the data engineering course. Right? [Antonis agrees]. Did you like it?**

52:02

Antonis

Yeah, I liked it. There were some skills that I wanted to learn more. I really liked it. I didn't have a lot of exposure to streaming and I wanted to focus on that a lot in this one. For the final project, I used Kafka – Confluent, actually. I would totally recommend this course to anyone. I really liked the document that you had. You had this document with the answers to questions that people had – frequently asked questions. That saved a lot of time. It was amazing how many times I had the same issue as other people. I think it's not easy to take a data engineering course because there's a lot of technical little things – versions change as you go.

53:17

Alexey

**It's very annoying.**

53:19

Antonis

Yeah, it was. But it was a very valuable thing to do.

53:28

Alexey

**What was your project about? You mentioned it was streaming, but what kind of project was it? Did you also do it about semiconductors?**

53:37

Antonis

No. No, I wanted to actually make something valuable for DataTalks.Club. [chuckles] I tried in the beginning to use the Twitter API. But I was seeing that I was taking a lot of time to get accepted as a developer there. I don't know what the reason was. Maybe some people do it faster, but I couldn't. So I said okay. I wanted to scrape Twitter for people who were specifically talking about DataTalks.Club and somehow use data. I said “Okay, I cannot do that.” So I went to the YouTube videos and I was thinking, “Okay, maybe I can do something about that.” I took the YouTube API, and I actually saw a video from somebody called Chris Jenkins, I think. He was using the YouTube API and playlists and taking the metrics from the videos – number of comments, number of views, and all that.

And he was streaming this to Telegram, when something new like a comment appeared. So I said “Okay, I will use kind of the same logic but I will put it on BigQuery and Stream every few seconds, the number of views, comments and likes. And then you can examine the dashboard.” From BigQuery I put in Looker. That was the streaming part. There were also other metrics that came as a batch. In my head, I was like, “Okay, maybe it's not useful to put in a stream. Maybe you can schedule it for every day or something like that.” So that was another pipeline. There were struggles, but it was useful. But it was funny. [chuckles] In the end, YouTube didn't allow me to use the API more than like 100 times per day, so it was a bummer. In the end, I couldn't make something like I wanted. Again, I took the tools that you had in each video and made something that did what I wanted.

56:20

Alexey

**Yeah, that sounds so cool. Maybe for those who are struggling with coming up with a portfolio project – because it's important for a freelance job – or for those who are now listening to this and taking the course right now, and they're struggling with coming up with a project idea. Do you have any recommendations for them?**

56:41

Antonis

Yeah. Find something that you personally like and try to see if there is data about that. And if there is, maybe you can build (if it's a data engineering project) a dashboard – or if it's a machine learning (MLOps) model. It does not have to be perfect. Definitely doesn't have to be perfect. Just try to make sure that you have this nice idea that you like, and it will definitely make you more eager and you're going to enjoy the whole building process more.

57:22

Alexey

**Yeah. What if I don't know what I like?**

57:26

Antonis

Yeah. That's another philosophical question. I think you should go out there and explore. Maybe join a startup, join a corporation, maybe do a break and try to see what you're passionate about. Explore. [chuckles] Like a reinforcement learning model – try to focus on the exploration part.

# Antonis' resource recommendations

57:56

Alexey

**Okay. Well, I guess we should be wrapping up, so maybe a last question for you. Do you have any resource recommendations for anyone who is listening to this? I think you mentioned the Lean Startup book. Maybe you have some other recommendations?**

58:11

Antonis

Yeah. I will definitely, again, recommend people to read The Lean Startup book. It will help them, whether they're in a startup or not. The whole idea of that process of working. I recommend that book for data scientists and machine learning engineers, analysts, I would also recommend a second part of it called Lean Analytics. It focuses a lot on the measurement part and finding good metrics for your startup or your project. It's a 10-year-old book but a lot of the parts are up to date. I think the writers update it. I would also recommend a book I really like (I'm kind of finishing it now) called Designing Machine Learning Systems. It looked very nice. It's a book by Chip Huyen.

59:34

Alexey

**Yeah, I will not attempt to pronounce the last name either.**

59:38

Antonis

And yeah – check out DataTalks.Club.

59:43

Alexey

**Thank you. We should be wrapping up. Thanks for joining us today, for sharing all your experience, and thanks for being a very active member of our community. And thanks, everyone, for joining us today too and listening in. I guess that's all. Have a great week.**