**00:02**

**Alexey**

This week, we'll talk about transitioning to analytics. And we have a special guest today, Juan Pablo, Juan Pablo was a math teacher who switched careers and became an analytics engineer. He currently works at Amazon. And he also mentors at the University of Washington, where he helps students get their first data role. Welcome.

**01:44**

**Juan Pablo**

Thank you. It's a pleasure to be invited to the DataTalks club.

## Juan Pablo’s background

**01:51**

**Alexey**

Thanks for joining us. Before we go into our main topic of transition into analytics to analytics engineering, let's start with your background. Can you tell us about your career journey so far?

**02:08**

**Juan Pablo**

I started as a mathematics graduate student, my goal was to become a math professor. That seems like a lifetime ago. After that, I left my programme, and I started taking statistics courses. I wanted to get into data analytics. But at the time I was not ready. So the easiest path to a job was teaching math. That's what I had experience with. And it was close to my original goal of being a professor. So I ended up being a math teacher.

**02:49**

**Juan Pablo**

When I was teaching the Intermediate Value Theorem for the fifth time, I realized I cannot do this much longer. I need to make a change. I need to get a job in Data Analytics. We can get later to why data analytics. I started working towards that transition.

**03:17**

**Juan Pablo**

My first role was at a consulting company in the Seattle Washington area. My second role was with T-Mobile. T-Mobile was a client [of the consulting company]. That's very common in consulting where the client poaches you, or asks you to join them full time. I was in consulting for about a year. I was with T-Mobile for a little over two years. Then I've been with Amazon for two years and one month. And here I am.

## Data engineering resources

**03:45**

**Juan Pablo**

I've been mentoring at the University of Washington. This is my fourth year. And we met online. I've been active on LinkedIn and Twitter for the past six months.

**04:06**

**Alexey**

Thanks for advertising our data engineering course. This tweet really took off and a lot of people saw the course because of your tweets. Thanks for doing that.

**04:16**

**Juan Pablo**

My pleasure. I saw it was shared by someone from England or Scotland. That tweet didn't get much traction. I opened the link, and that's how I found out about DataTalks.Club. I thought, "This is pure gold. This is a valuable learning resource, a valuable community. It deserves more attention." People are always asking for resources for data science and data analytics. But I've been around long enough to realize that there aren't enough resources for data engineering. So, when I saw that one, I thought "I need to share it so that it gets more visibility. Hopefully people will join right away. But if not, at least it's in their radar."

## Teaching calculus

**05:10**

**Alexey**

Thanks. You mentioned this intermediate value theorem. Is it something from Game Theory?

**05:15**

**Juan Pablo**

No. Intermediate value theorem should be from calculus.

**05:25**

**Alexey**

So, you were teaching calculus?

**05:28**

**Juan Pablo**

Yes, I was teaching calculus in high school. It was a private high school. And I also was a teaching assistant when I was a graduate student. I always took the same course - calculus one. So I had done it four times in college and one time in high school. I was at the board, and something clicked. "I don't want to turn 50 and still do the intermediate value theorem". So, something was planted in my mind then. I started doing more research, I started studying at night and - it's been six years since then.

**06:18**

**Alexey**

You're probably quite good at taking derivatives, integrals and using this chain rule stuff.

**06:27**

**Juan Pablo**

To be honest, I haven't done it in a while. As a matter of fact, I can still do the chain rule by memory. For integration by parts, I might have to revisit the theorem and then be able to do it again.

**06:47**

**Alexey**

I was taking a deep learning course. In deep learning, you have backpropagation, where you need to apply the chain rule a lot. I was having a hard time doing back propagation for batch normalisation. The derivative for it is just mind-blowing. But, I guess, you can do this with your eyes closed.

**07:16**

**Juan Pablo**

Hopefully. When you think about the chain rule, I'm sure at some point, you must have seen it either in high school or in university. Unless you go into math or statistics, you might not revisit it again. It's common that people forget. Funny that you bring that up. When I was a teacher, sometimes students would ask me, "but when will we need this?" And I would try to politely change the subject.

**07:57**

**Alexey**

Now you can say "for deep learning". At least, for the theory part. But now, you can do whatever you want with TensorFlow, and it will take care of computing the derivatives. I'm not sure if it was really needed. Maybe at some point of my life I understood how it works. Now I don't.

## Transitioning to Analytics

**08:24**

**Alexey**

So, you were a math teacher. You were tired of teaching Intermediate Value Theorem for the fifth time. And then you went to research. Right? Is this how it happened?

**08:37**

**Juan Pablo**

Would you like me to talk about the transition?

**08:40**

**Alexey**

Yes. How exactly you went from the point when you realised, "This is not for me. I do not want to turn 50 and still teach that" to the point when you got hired? How did it actually look like? What were you doing to go to the industry and start working as an analytics engineer?

**09:14**

**Juan Pablo**

When I was a graduate student in math, I was mainly taking math courses. But I knew that I wanted to leave the program at some point - most likely after the masters. So I started taking courses in biostatistics and statistics. That's how I became familiar with hypothesis testing, linear statistical models, SAS, statistical software, and then some R programming. We're talking about 2012/2013, when data science and data analytics were starting to become popular. Some of my classmates also dropped out of the program to join software engineering bootcamps.

**10:16**

**Juan Pablo**

I was a teacher, so I decided to leave the school. It was a private school, so you're contracted every year. They offered me to come back the next year. I declined the offer. At night, I would watch YouTube videos. I would go through other people's GitHub profiles. I would try to strengthen my R programming skills and to familiarise myself with database packages in R, with machine learning packages, and how to use them. I didn't know at the time that I needed to learn SQL - it's what I use most of the time now. I didn't know about Tableau. I used R for data visualization. But it started.

## Data Analytics bootcamp

**11:21**

**Juan Pablo**

I was in the middle of the country, in the Midwest. So after my year ended, I moved to the west coast, where the jobs are, and where the tech money is in the United States. Before that, I actually lived with my parents. And I joined a bootcamp in the area. There were multiple bootcamps. Being a teacher, I went for the cheapest bootcamp. Lesson learned.

**11:59**

**Alexey**

Would you do it differently if you were doing this switch today? Would you not go to the cheapest one?

**12:06**

**Juan Pablo**

Yes, I would go into another one with a bigger network. Because it's ultimately about the network. But that's how you learn, so I just have to live with it. I met some interesting people, so I don't fully regret it. But I have to acknowledge that I got what I paid for. At least there they gave me a roadmap and made me aware of the things that I didn't know: SQL, Tableau, Power BI, some software tools. They make you build dashboards and share them with the org. Most companies would prefer to use a software tool like Tableau, Power BI, QuickSight

**13:04**

**Alexey**

The bootcamp was about analytics, not about data science?

**13:07**

**Juan Pablo**

It was mainly analytics. They advertised it as both, but it was mainly analytics. And it seemed easier to get a data analyst job than a data scientist job, particularly with no internships or no tangible experience. And at some point, the time you're looking for jobs grows longer, and you will take anything. It made me aware of my learning gaps.

**13:52**

**Juan Pablo**

It also made me aware that they cannot guarantee me a job. I need to go out and hunt. I need to network. I need to meet people. And I would do that. Actually, most of the content that I share online and in the mentorship sessions with the University of Washington or outside of it - it comes from that time period in my life. I was searching for a job, and I wasn't landing one. It actually took me nine months. It was painful. I was frustrated.

## Getting money while studying

**14:34**

**Alexey**

You didn't have any income during this time, right? You quit your math job. And you also were taking bootcamp. It wasn't free, right? So you needed leave on your savings.

**14:47**

**Juan Pablo**

I did. Also - something I don't share in my tweets - but I did two things. I worked at a restaurant. Working at a restaurant with a fixed schedule wasn’t working for me once I started getting interviews. So I started driving Uber. I was an Uber driver for some time. It gave me the flexibility to do it.

**15:23**

**Alexey**

You should share this. This is like "From Uber driver to analytics engineer". It sounds much cooler than from “math teacher”.

**15:34**

**Juan Pablo**

It does sound much cooler. But the reality is, if I were to share "from Uber driver to analytics engineer", it makes it sound like I had no education. The reality is that I did. I just needed to get myself on the interview. So I don't want to be misleading. But yes, it does sound cool. I tried multiple things. You reached out to me about one specific Tweet where I say "eight tips and alternatives on how to land an analytics engineering job". I tried many of those.

## Going to meetups to get a job

**16:12**

**Juan Pablo**

Moving back to the story. Back in 2016, people would work online, but network in person. Luckily, I was in the Seattle area. There was a neighbourhood called Pioneer Square. They had a venue where they hosted events - like meetup events. If you go to meetup.com, you would get Python events, software development events, data science events. I went to that place 10 or 15 times during my search. During one of those times I met this man who was hiring. He had a consulting startup. We chatted, and I shared my resume with him. Eventually, he would hire me, but at the beginning he ghosted me. But through someone else, he received my resume for the second time. When he got it for the second time, after a couple of months, he reached out to me. He said, "I guess, you're still looking? And you're not going to give up. So I want to interview you." And then I got the job.

**17:51**

**Alexey**

That's such a nice story. I imagine it was quite difficult for you because you needed to drive Uber. It must be frustrating to apply and then not hear back. That's quite admirable that you did this for nine months. As I understood, because of the network, you managed to first talk to this person; and then, through somebody else, talk again. This is the power of the network, right? You wouldn't be able to do this just by clicking a button on the website, right?

**18:30**

**Juan Pablo**

Correct. Clicking "Submit" works for some, but it didn't work for me at the time. It works for me now: my labels are different. After working for Amazon, people will give you more opportunities than when you're a high school teacher or a college graduate without any experience. So in those situations, you have to hustle.

**18:57**

**Alexey**

It's like social proof, or I don't know what you call it. People see, "This person works at Amazon. They must be quite good. Let's interview them." But when they see a math teacher, they have 100 other math teachers. they are "Okay, how do we select the math teacher we want to interview now?"

**19:17**

**Alexey**

Was it the case for you? I imagine in the bootcamp, there were many people from different backgrounds. Then it was quite difficult to set yourself apart from others like you.

**19:34**

**Juan Pablo**

There were 10 of us. Six or seven went back to doing what they were doing before. I am friends with a couple of people from the boot camp. Two are in data science. One is in software sales. Everybody else went back to doing what they were doing.

**20:01**

**Alexey**

Do you think it's because it was the cheapest bootcamp? Or because of other reasons? Market was tough back then for people without experience?

## Looking for uncrowded doors

**20:17**

**Juan Pablo**

The market is tough for people without experience. If you're in that group, you have to hustle. You have to look for alternative ways to get in front of a hiring manager. You have to think outside the box. You have to look for the uncrowded doors. If you look for the crowded doors, click "Submit", or even a job fair, it's going to be tough. In those crowded doors, you have the top applicants coming in.

**21:06**

**Alexey**

What are these alternative ways that are less crowded? Clicking "Apply" is a crowded way, a lot of people do this. Job fairs are also not the best approach. What are the better alternatives? You mentioned meetup, I guess, this is one of them. Is there anything else?

## Using LinkedIn

**21:26**

**Juan Pablo**

I have this tweet in front of me. First, if you're on LinkedIn, it's a big plus. But just being on LinkedIn is not enough. It helps if you're active on LinkedIn. Most people use LinkedIn the wrong way. People can do more than just liking a post. People can do more than re-sharing an article and not writing anything about it. People can do more than sharing a PDF of somebody else's work. We can do more than just saying "My company just went public".

**22:29**

**Juan Pablo**

I believe that everyone has something to say. Everyone has a journey. People are out there dying to hear what you have to say. It might not get traction the first few times. But you'll eventually find your voice, your tribe, your people. So, LinkedIn must be up to date. And be active there. If you are shy, it's fine initially. But you can comment on other people's posts, something beyond "I like this", or "I agree with you".

**23:14**

**Juan Pablo**

Ask questions. Add value. Don't pick fights. That'll go a long way. It brings visibility to your profile. And if your profile makes it obvious that you are looking for work and that you're serious about it. If you have a portfolio, make it easy for people to land on that portfolio. Then the conversation is different.

**23:47**

**Juan Pablo**

Another one. Your resume should always be up-to-date. If you have a link to it, share it. You're looking for work, and someone approaches you. They say, "could I take a look at your resume?" You tell them "I have to go back home and get on my laptop so that I can share it with you via email." You just lost an opportunity. It should be "Let me just send it to you via LinkedIn on my phone right now". Or a QR code, or a link.

## Portfolio

**24:23**

**Juan Pablo**

A third one is to have a portfolio. It doesn't have to be the most advanced portfolio. But it should be a link where people can see what you've done. Especially when you're trying to land that first job. Since I mainly was familiar with R, I used rpubs.com. In fact, when I went to see it, I could see that the posts were up, but when I clicked on them, they didn't load anymore. It's been six years. But that's what I used.

**25:07**

**Alexey**

I remember that there's R markdown language. In RStudio, you can quickly type something, click a button, and then it gets published. Right?

**25:15**

**Juan Pablo**

Yes, it'll create an R Markdown file, and it'll push it.

**25:21**

**Alexey**

I remember doing this as well when I was learning R. That's a nice thing. So you used that for your portfolio and in rpubs you had all your all the projects you did in R, right?

**25:37**

**Juan Pablo**

Correct. It had my projects in R. It was mostly data wrangling, exploratory data analysis, data visualisation. I used a library with Google Maps - it was useful to display maps, heat maps, locations. And I had some machine learning, some basic classification and regression models. The idea was for people to see that I was serious enough, and that I had something up.

**26:29**

**Alexey**

How many projects do you need to have in your portfolio to show that you're serious? 1, 2, 3, 5?

**26:39**

**Juan Pablo**

Three is good enough. We're talking about entry-level roles. My first role didn't pay much. So I think it was good enough. I actually had maybe seven or eight.

**26:57**

**Juan Pablo**

I often get the question, "How many projects should I have? Should I wait until I have that magic number to share it?" No. I will always say this, any portfolio is better than no portfolio. Even if you have one, just put it up there. Socialise your work. Share it on LinkedIn, on Twitter, on hashnode, on medium. Let people see it. Some will think it is not good enough. Some will laugh at it. They're not going to laugh at it online, they're not going to share publicly how disappointed they are in you. But if someone finds it interesting, clicks on it and eventually lands on your LinkedIn page, and maybe connects with you, it's a win.

**27:59**

**Juan Pablo**

If you're looking for a job, you could have 100 rejections. But if you get hired by one company, then you made it.

**28:09**

**Alexey**

You just need only one successful application, right?

**28:12**

**Juan Pablo**

Yes. That's it. And you're in.

## Talking to people on meetups

**28:19**

**Alexey**

Let's say you're on a meetup. And you want to... make a move. You see somebody and you want to say, "I'm looking for a job". How do you do this?

**28:33**

**Juan Pablo**

I would go to these meetups. I was excited about the presented topics. But after two or three meetups, I realised that I'm here to get a job. Initially, I would talk to the presenters, which were people in their 20s-30s. But quickly, I started realising that they are junior or intermediate data scientists. I need to talk to the managers. So, at the time, my strategy was to sit in the back, so that I can scan everyone in the room. And I picked out people who looked a bit older - 40s and up.

**29:26**

**Juan Pablo**

Typically, at the end of the meetup, or at the beginning, there is a networking event. They are giving out some food and sometimes alcoholic drinks. I worked in restaurants throughout my undergraduate career. My parents had restaurants when I was growing up in Latin America. That environment was always familiar to me.

**29:57**

**Juan Pablo**

So, I would just approach them and say, "Hello, how are you? My name is JP". JP is easier for most Americans to pronounce. I would introduce myself. I would ask them who they are and what they do. I wouldn't tell them that I needed a job. I would try to connect with them and be their friend. At some point, the question will arise. If it doesn't arise from them, you can say, "by the way, I'm looking for a data scientist or a data analyst role. My background is in mathematics. I used to be in education. I've been creating some small projects. Would you happen to know who's hiring?" Then the conversation starts. If they don't want to help, they're not going to say "no", but they'll tell you that they don't know anyone. But if they do, they'll at least connect with you on LinkedIn. And they might share your profile with someone else.

**31:04**

**Alexey**

How many people did you need to talk to find that one who eventually helped you to get a job?

**31:12**

**Juan Pablo**

I don't know... Maybe like 30-40 people. Some people didn't. They were not hiring. Some people were just curious about data or software engineering, but they were not in the field. Maybe they're in insurance, they're considering making the switch. Eventually I met this person who hired me and helped me.

**31:38**

**Alexey**

If I summarise it: look for people who look like managers, not juniors. Talk to them, and say "by the way, I'm looking for a job".

**31:53**

**Juan Pablo**

I don't know if this will work for everyone, but it worked for me. I can only share my experience.

## Eight tips to get your first analytics job

**32:01**

**Alexey**

In that tweet that we mentioned. I think you have it pinned. The tweet says "Getting your first job in data analytics isn't always easy. Blind applications don't work for everyone. Sometimes they only lead to rejections. These eight tips and alternatives can help you land your first data analytic jobs." We already talked about LinkedIn. Did we talk about everything from that tweet or is there something we didn't cover yet?

**32:27**

**Juan Pablo**

We talked about LinkedIn. We talked about having your resume handy. We talked about building a portfolio. I would love to talk about the rest.

**32:35**

**Juan Pablo**

I had to reach out to a number of recruiters and hiring managers. In my desperation, I crafted a message. I also did some FreeCodeCamp web development courses. So I created my own website back then. Now I have a new one created with a Website Builder. But back then I crafted a message saying I was a data analyst with some web development background. I would reach out to recruiters and hiring managers on LinkedIn. I sent 200 or more of such messages. I got about five replies. One led to an opportunity. But I also had the opportunity from the meetup. So I chose that one.

**33:44**

**Alexey**

So you actually had two offers?

**33:46**

**Juan Pablo**

Yes. But the one for the meetup was a full time role. The other one was like a temporary trial period. I ended up going for the full-time one.

**33:59**

**Alexey**

That's at least something, right?

**34:01**

**Juan Pablo**

Absolutely. I will talk about that in just a few moments.

## Consider contracts and temporary roles

**34:06**

**Juan Pablo**

Number five. Consider contracts and temporals. I have met multiple aspiring data scientists and analysts who were looking for their ideal company. The ideal company could be Amazon or Facebook. They will not consider a contract role that pays maybe half, but will give them the experience. So they will sometimes turn down these opportunities or won't even look at them. They'll continue looking at the big companies. Then the months pass and they still have nothing. They have no job, no money and no experience. So I would consider contract roles. That's how many people get started.

**35:02**

**Alexey**

What's a good place to find such roles?

**35:06**

**Juan Pablo**

In the US, dice.com is the best place. If you want to stand out from the crowd, call the recruiters on dice. You click on a job posting and you see the recruiter John Smith. Many times they post their number. Just call them. Ask them questions. "I'm curious. I want to know what it's like? Who's the client?" Most of them won't share that. "How long is the contract? What's the hourly pay?" If they tell you $50 an hour, multiply that by two - that's 100k a year. That's a quick way of calculating it.

**35:48**

**Alexey**

What about places like Upwork, and Fiverr? There are freelancers there who are doing data analytics. If somebody wants to get the report, they go to Upwork and find people there. Do you think it's a good place? Do you have any experience with this? Maybe you know somebody who used it to get experience?

**36:41**

**Juan Pablo**

I use Fiverr for other things: for proofreading, for translations.

**36:57**

**Alexey**

Do you use it as a client?

**36:59**

**Juan Pablo**

Yes, never as a service provider. My take on it, as a client: if you live in the United States, or Canada, or Western Europe, then you are the most expensive by default. You're competing with people from other countries who can offer more competitive pricing. That puts you at a disadvantage.

**37:31**

**Alexey**

And dice focuses on North America, right?

**37:35**

**Juan Pablo**

It does definitely focus on North America. I don't know if they are available outside of North America. Dice looks for contract and temp roles in your market where you need to be in the market - in that geographical location where the job is. If not in the same city, at least in the same country.

## Getting experience with non-profits

**38:07**

**Alexey**

Let's go to number six.

**38:12**

**Juan Pablo**

I hear this a lot: "I don't have enough experience, and I don't know how to get it". You can help a nonprofit with a project. It might not be the ideal project. But it is a project that is helping an organisation. It's real. I don't want to say "business case", because it's non-profit, but it's a real-world problem that needs to be solved. That's an opportunity.

**38:44**

**Juan Pablo**

You can either reach out directly to them, or there's a website called "catch a fire". It's a platform that connects you with nonprofits who need technical work. You help them out, and then you ask "Is it okay If I share this, if I put this on my portfolio? I will mask the numbers, but I want to share that I've done something for a company". You can list on your resume that you were a data analyst consultant for three months. That - in my eyes - is real-world experience. That's an alternative. It's very different from just clicking Submit.

## Create your own internship

**39:39**

**Juan Pablo**

Number seven: create your own internship. This is what I did with the linkedin messages. When I got offered that temporary job, or temporary probation period. You reach out to someone, typically a smaller medium company. You're not going to reach out to Google and try to pitch this to them. They'll be open to listen.

**40:04**

**Juan Pablo**

You reach out to them. You introduce yourself. You introduce your portfolio, what you bring to the table, how you can add value to them. Briefly. Be concise. Then you say, "I'm willing to work for you for 2-3 months for <an hourly amount>" - typically something that is a lot cheaper than a full timer. "After that three months period, you can decide to hire me or not."

**40:39**

**Juan Pablo**

The good thing here is that if they give you a job - great, you have a job. But even if they don't, you have three months of experience. During those three months, you will prove yourself. But you will also have time to apply to other places. Because now you are a data analyst. Sure, you're in a three month probation period. But I don't think anybody needs to know that. If you want, write "intern" or "temp". You can spin it in any way you want. But you have the experience now.

**41:17**

**Alexey**

So the 200 messages you mentioned were about that? You wrote "This is me. This is the kind of work I'm looking for. Would you consider me for a three months internship?". Right?

**41:35**

**Juan Pablo**

Yes. I said, "This is me. This is my work. This is how I can add value to your company."

**41:40**

**Alexey**

Does it have to be personalised? Probably there was a line in this message that you would change for every company? Or would you just copy and paste?

**41:52**

**Juan Pablo**

I would just copy and paste. I targeted small-medium sized marketing agencies who need some analytics work and potentially some web development work - in my area. I also targeted them in cities where I had lived. I didn't go to school in Seattle, Washington. I went to school in Iowa. So, if I send a message to a company in Iowa, I would say "I'm an Iowa grad". So that they think "he's one of us".

**42:35**

**Juan Pablo**

To be honest, I was so desperate that I was trying multiple things.

**42:41**

**Alexey**

Well, it worked, right? You said that there was an opportunity at the end.

**42:45**

**Juan Pablo**

Yes, there was an opportunity. They offered me $20 an hour, which for a tech role in Seattle is peanuts. I think Starbucks offers $20 an hour to be a barista.

**43:02**

**Alexey**

But you cannot sell the experience later. You get the same money for being a barista. This is not something you can put on your CV when you look for a job. But this one, even though it pays $20, it goes to your CV. Then you can sell it to the next company.

**43:20**

**Juan Pablo**

It's a long-term investment. I don't even know if "investment" because you're actually making money from it.

## Networking

**43:28**

**Juan Pablo**

The last one is network. Put yourself out there. Reach out to friends, family, alumni in your network - if you went to a specific school. Go to virtual meetups. Join specific groups on LinkedIn. There's also Slack. I'm sure that there are many that I don't take advantage of right now. But they're out there. Even Facebook has groups on software engineering. Try them out. See what works for you. Don't give up after the first message. No one will offer you something on the first message. It takes time.

**44:23**

**Alexey**

200 messages, right?

**44:26**

**Juan Pablo**

You have to keep popping up too. On Twitter, you have to keep popping up for people to say, "I've seen this person 10 times. I'm going to click on it now".

**44:40**

**Alexey**

I heard this "overwhelm the algorithm". If you start posting on Twitter, then Twitter will show your face - your messages - to others. You just need to keep pushing.

## Website for hosting a portfolio

**44:57**

**Alexey**

One thing I wanted to ask you. You mentioned you did the first website yourself - you were taking some courses on FreeCodeCamp. But you used a website builder for the website you have right now. What is this builder?

**45:18**

**Juan Pablo**

I used Zyro.

**45:24**

**Alexey**

Is it like a no-code site builder?

**45:27**

**Juan Pablo**

Yes, no-code site builder. They are based in Lithuania. I am very pleased with them. I've reached out to them on Twitter multiple times for tweaking of my website. They were very helpful.

**45:45**

**Alexey**

It's a nice, clean and responsive design. This is a good option for people who are looking for a place to host their portfolio.

**46:00**

**Juan Pablo**

Yeah. I am pleased with them. If you go to my Twitter, you can find it. And you can click on it.

**46:08**

**Alexey**

It costs some money, does it?

**46:09**

**Juan Pablo**

It does. It was more competitive in terms of pricing than the paid version of WordPress, and Squarespace. And I don't know if it's the nerd in me, but I like the idea of trying something new. They are inLithuania and they're competing with the big guns here in the US. So I thought I want to support this venture.

**46:56**

**Alexey**

If you have to drive an Uber to actually survive, then maybe you are not ready to pay for a website. What are the good alternatives that are free?

**47:16**

**Juan Pablo**

WordPress has a free tier. It'll just say "WordPress" in the URL instead of your name. Rpubs is another one. You can always host your work on GitHub. You can use hashnode to describe your project. At the very top, somewhere in the middle, and at the end, you say "link to code". If you don't have the money, you have to get creative. I am in a position now in my life where I'm okay paying for hosting and a website builder to get a clean URL and a clean look on my website.

**48:12**

**Alexey**

That's not the most important thing, right? If you're looking for a job, a GitHub page will do.

**48:19**

**Juan Pablo**

Yes, a GitHub page would do. But you have to make it easy for those who land on your page to know where's what. It's okay to be redundant and over explain. It's much better than having no description. Most people don't want to look just at the code. You need to have some comments. You need to know what it accomplishes.

**48:52**

**Alexey**

When I hire, if I look at the CV of a candidate, only in rare occasions, I would actually go and check the code. I have only limited time and many candidates. I don't have time to check the code of every candidate. Maybe at the end of the funnel, but not at the beginning. Definitely not before the first interview. So, for each project in GitHub it's a good idea to have a good description. It helps to quickly get an idea what the project is about, instead of trying to figure out this from the code.

## I’m a math teacher. What should I learn first?

**49:34**

**Alexey**

We have a few questions. The first question: "I currently work as a math teacher, and I want to switch careers to data field". Sounds familiar? "Can you give tips or tricks to do it?" I think you already gave quite a few suggestions. This question was asked before we covered that part. The question continues "What should they learn first?". I think you'd go with SQL, right?

**50:04**

**Juan Pablo**

Definitely SQL. Start with SQL, with a visualisation tool, and one programming language. Being a math person, I was always attracted to R. But if someone comes to me and asks "R or Python?", I would suggest Python over R. It's more marketable in my opinion.

**50:42**

**Juan Pablo**

I just shared this tweet. It describes how I would transition from teacher to data analyst, analytics engineer or business intelligence engineer. In usual Twitter mode, it screams at you. It says "I was a broke teacher". But it's to get people to click on it. There's useful information there.

**51:23**

**Alexey**

So, SQL, Python, some visualisation tools. Something else? That's probably enough for the start? And then use the skills to build the portfolio.

**51:35**

**Juan Pablo**

Use your skills to build a portfolio. Look at business analytics or data science use cases. Familiarise yourself with what type of problems will come to you. Also look up data analyst interviews. It's good to familiarise yourself with the interview process.

**52:02**

**Juan Pablo**

I don't know who this person is. Perhaps they're different from me. But teachers, STEM students - math, physics, stats, computer science students - think that they should know everything before going into an interview. Or they think they should be "good enough". "I'm just going to study the fundamentals. And then I'm going to crack the interview."

**52:27**

**Juan Pablo**

You should familiarise yourself with how the interview is structured. There are commonalities across multiple companies. Typically, the big companies set the pace. And then everybody else follows. Or most smaller companies follow.

## Analytics engineering

**52:48**

**Alexey**

By the way, what do you do now? You work at Amazon, right?

**52:51**

**Juan Pablo**

Yes, I'm an Amazon in advertising. I'm in a BI and data engineering team. We consume data from upstream teams, and then make it available to troubleshooting consultants across nine different countries. It's a lot of ingesting data, building pipelines, adding business logic, and eventually creating dashboards for reporting or to accelerate the troubleshooting process.

**53:34**

**Alexey**

Is this what we would call "analytics engineer"?

**53:41**

**Juan Pablo**

Yes. Amazon calls it a business intelligence engineer. So it depends on the company. I know that Apple has analytics engineers. Netflix does too. Many of the new startups are calling it analytics engineer.

**54:01**

**Alexey**

The first job you landed, was it an analyst job? Or an analytics engineering job?

**54:08**

**Juan Pablo**

The title of my first job was data scientist. But I was mostly writing SQL and building dashboards.

**54:21**

**Alexey**

Is this what a typical analytics engineer does today?

**54:29**

**Juan Pablo**

At my first job I was not building any pipelines. So the best way to describe it is data analyst or data analyst consultant. Most of the time I was writing SQL and using Tableau. I personally don't use Tableau anymore. Since I work at Amazon, I use AWS QuickSight. I've gotten quite good at that. I'm sad that not many people use it because I would love to bounce ideas on how to design dashboards with them.

**55:22**

**Alexey**

But the main concepts of visualisation still apply to Tableau, Power BI or whatever you use, right?

**55:30**

**Juan Pablo**

They do. QuickSight is younger, so it could feel a bit clunky at first. And so I'm always interested to see visually pleasing QuickSight dashboards.

## Best suggestion: keep showing up

**55:45**

**Alexey**

When you started, what was the best suggestion that helped you more than others?

**56:02**

**Juan Pablo**

It's something that still works. You have to keep showing up. Showing up is 50% of the battle, right? You have to be there all the time.

**56:28**

**Juan Pablo**

I'm not the most technical person in most teams that I joined. I'm average when it comes to how technical I am. But I bring other things to the table: soft skills, hosting team events, suggesting new ideas for documentation, or creating documents of frequently asked during office hours. Whatever it is, I bring something else to the table. I'm always there. I'm always showing up to the meetings. I'm always showing up online.

**57:15**

**Alexey**

Consistency, perseverance.

**57:17**

**Juan Pablo**

Yes. That goes a long way. That applies for any career. People tend to get discouraged when they're trying to find that first data role.

**57:29**

**Alexey**

That applies to everything. Take Twitter, before you start getting your first like, you need to publish something for at least a couple of weeks. Then people will notice you. Then people will start liking it. The same with getting a job. You need to show up on meetups. Then people will start noticing you. And then you will find that opportunity.

## Networking on online conferences

**57:55**

**Juan Pablo**

Now, because of the pandemic, not all meetups are open or not everyone will go. But you can do the networking online. That's the biggest change between 2016 and today.

**58:17**

**Alexey**

There are online conferences with networking. It's called "random date". There is a pool of people. The software takes a pair of people randomly and connects them. They can talk to each other for five minutes. If they want to continue, they keep talking. There's a platform "hopin" that does this. Other online conference platforms also have this feature. So if you attend an online conference, and the main thing finished, it's pretty valuable to stay a bit longer and take part in this networking session. You are assigned randomly to somebody, and you can talk to them. I met amazing people. We connected on LinkedIn afterwards. Some of them got invited to this podcast. That's quite useful. Do that.

**59:21**

**Juan Pablo**

There's definitely value in meeting people.

## Communication skills and being organized

**59:25**

**Alexey**

We should be wrapping up. Last first question. "What are some important skills that you should highlight in your portfolio? Things outside of common data skills". You mentioned soft skills. What else?

**59:59**

**Juan Pablo**

Everybody's doing exploratory data analysis, data wrangling, data visuals. To set yourself apart, you can bring good communication: be concise and direct, be clear with your words, when you describe what you're solving. The STAR format - Situation, Task, Action, Result - is quite useful. It summarises your project. It gives business context. It shows that you understand the underlying business or situation in your project.

**1:00:55**

**Juan Pablo**

Being organised is also important. If your project is one structure, apartment,

**1:01:06**

**Alexey**

Your project should have a clean readme, then it's clear what's happening there.

**1:01:12**

**Juan Pablo**

Yes, that goes a long way. It's often overlooked by engineers, analysts and scientists when they first start out. When they bring you on, they hire you on the team. You don't want files to be just on engineers' laptops. They need to be in a repository. It needs to be organised in such a manner that if everyone in the team leaves, and you get new people, the work can still continue successfully.

## Finding Juan Pablo online

**1:01:54**

**Alexey**

Anything else you want to say before we finish?

**1:01:59**

**Juan Pablo**

Thank you for the invitation. If anyone wants to get a hold of me, follow me on Twitter. I'm more active on Twitter than on LinkedIn. But I am on both.

**1:02:15**

**Alexey**

I will put them in the description.

**1:02:31**

**Alexey**

ThatJuanPablo, right? And your website is also ThatJuanPablo.com?

**1:02:49**

**Juan Pablo**

That has become my brand these days. Not very creative. But that's it.

**1:02:55**

**Alexey**

I guess just "JuanPablo" was already taken?

**1:02:59**

**Juan Pablo**

It's a quite common name. Maybe not so much outside of Latin America and Spain. But the moment you go to those two places, you'll meet many.

**1:03:13**

**Alexey**

Thanks for joining us today. Have a great weekend.

**1:03:22**

**Juan Pablo**

Thank you, Alexey. I'll see you around.