

Matthew Castino, Data Analyst - Transcript

Denise: Today I'm talking with Matthew Castino. He's a data analyst at Canva and he has a PhD in Behavioural Neuroscience from UNSW. Hi Matthew.

Matthew: Hi.

Denise: So, Matthew, let's get right into your job. Can you tell me a little bit about what it's like being a data analyst at Canva?

Matthew: So, Canva is a pretty interesting place to work for. So, it's an Australian startup and it's going through a period of really rapid growth, so we have almost 100,000,000 users in the last in the last 28 days, monthly active users. So, we're going through a period of like, really rapid growth. We're hiring a lot. We're just trying to really get our name out there and raise awareness and develop our product. So it's really great time to be involved because you're sort of doing things to build a company from the ground up. And it's really exciting to be involved in that kind of environment to get into a company that sort of in its infancy, but it's like the early stages of its development, so you feel like you know what you're doing is really having an impact on helping the company grow. And it has a real focus on doing the right thing and being a positive force in the world. So, a lot of its services are free or not for profits, so it feels good to be worked for a company that's creating a positive impact on the world.

Denise: Yeah, absolutely. And what kinds of things do you do as a data analyst? What does that mean?

Matthew: So, I guess my role is to help my stakeholders so make data driven decisions. So, I work in in marketing, specifically in lifecycle marketing. So, we deal with like communication with our users through email and push notifications and messaging in the product. So, we're trying to focus on how we can best help our users navigate the product and get the best value from it and create like a really personalized messaging experience. So, a lot of that has a lot of psychology flavour to it, so it's like really trying to understand our users and what they want from the product and how we can help them achieve that because it's such a diverse use case for our product. So, there is a real sense of trying to understand our different users and what they what they want to achieve. So my goal is to sort of try and help the marketers achieve that personalization goal or that ability to reach all of our diverse audiences and segments and create a messaging product which is really tailored to those different use cases, so I guess it's to try and come to generate insights from the, you know, billions of data points that we're generating and to try and understand how our users are using the product, what they're trying to get from it, and how we can help drive engagement through sending more tailored personalized messaging.

Denise: Yeah, so if you could, Matthew, what would a typical day look like for you? How exactly are you helping the marketing team to get this information to tailor advertising to their customers?

Matthew: So, one part of it is evaluating the effectiveness of their campaigns, so I do a lot of, like what's called, you call it hypothesis testing in psychology, but we call it A/B testing in business. So, I help them run A/B tests to look at, like for example, we roll out a campaign to some users but not to other users and we can test what campaigns and what changes that we make are effective. So, there's a lot of hypothesis testing and we use like a Bayesian experimental framework for that. So, a lot of the skills that you learn in in psychology, you know they have a lot of use cases outside of academia or research or even being clinician. So yeah, A/B testing is a big part of it and then it's also trying to allow them to

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visualize their metrics or visualize the impact that they're having. So, trying to synthesize the vast amount of data in a way that allows them to sort of visualize the impact they're having, or identify areas or statements which are not being impacted by our messaging. Yeah, so that's kind of the key. The key thing is just trying to help them visualize what impact they're having and the performance of their work, and then allow them to test it so that they can make changes in a data-driven way.

Denise: That sounds really interesting. Would that make up the bulk of what you're doing every day, really?

Matthew: Yep, so sometimes they want to know, like for example, we're interested in running a campaign for this new product, can you give us a bit of background on like how it's used now or what the feature with the adoption rate is? Or, we want to make this change to our campaign.... So, for example, we have we operate in like 190 countries, right? So that brings challenges like localising your content to different you know cultures and ethnicities and languages and all those sorts of things, so they might want to say we're gonna take this email. We want to try and make it more appropriate for this specific locale. For example, say for Japanese users, we want to update some of the content to make it more appropriate for users from that country, so it resonates more with their culture. Can you tell us what the engagements like with this email or this send now, and then we can sort of use that to benchmark the effectiveness of the changes that we make. And then we can run an experiment and then see, you know what kind of impact we actually had. A lot of it's just providing tools for the marketers to sort of self-serve their data so they're not constantly relying on me to generate everything they want. So, we create a lot of dashboarding so they can go in and self-serve a lot of what they're doing. So, a lot of it's also just providing the tools for them to have data at their fingertips to make quality decisions around their work. And then we're trying to do larger scale things like think about how we can scale our experiments and experimental frameworks to deal with hundreds of millions, or billions of users, so there's that flavour of it too with the startup. Like we're really trying to make sure that we can scale what we're doing to service, you know potentially 10s of marketers for hundreds of millions of users.

Denise: So if I understand it right, then your role as a data analyst is to work with the sales and marketing team to understand what customers need or what information they need to know about customers, to get that information, to communicate that information back to the sales and marketing teams, and also to build technical tools where they can access this information on their own the way that they need to in the future across international offices.

Matthew: Exactly right. So, I've got stakeholders that work in Manila and I've got stakeholders that work in the United States. So, even without the COVID setting, a lot of our work is online and communicating remotely and yeah, it sounds like you summarized it really, really well.

Denise: I had a little help here because I actually did something for a while two or three careers ago in my life where I was working in data and in research for a marketing team for an international newspaper. So, I've got some like background sense of what it is you're doing, but it sounds like you're doing a lot of different roles that are beyond what probably people who are in psychology and thinking, do I want to be a data analyst.... They might be thinking it's about looking at information and making

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sense of it and then maybe communicating that sense to someone else. But actually, I think you're doing a lot more than that. I think your role is a lot broader than that, so I was just trying to check if I was right.

Matthew: Yeah, sure, so I mean, I guess a big part of it is trying is trying to use data to drive strategy and think strategically. So, it's not just about like computation. Computation's probably only a small part of what I do. The hard part, and I think that the thing that academia set me up well for is looking in the right place for the data and for doing the correct analysis to get the right interpretation. Because a lot of people are good computation, and there are a lot of people at in analytics that have better at the computation than me, but I think that the value that I can bring is on that trying to interpret it and really get into the mindset of our users and understand what those metrics are telling us, rather than just coming up with a set of numbers.

Denise: Yeah, so it's math as well as an empathetic understanding of the data. Let's talk a little bit more about how your studies have helped you, because you have studied a PhD in Behavioural Neuroscience. What did you learn in your whole career in psychology up to, or your studies in psychology up to your PhD that helped you to get this job?

Matthew: For a long time, I think I didn't put as much value on this on the skills that I developed there and I had this perception that they were quite niche. You know, that like I developed all these skills and spent a lot of time honing skills to become a behavioural neuroscientist and then got to a point where I thought, you know, maybe this career isn't right for me. And I thought that I would have a lot of trouble pivoting into a different industry or pivoting into it into a different career. But in reality, there's a lot of companies that really value the skills that you learn in that environment, but also personality traits. Like, doing a PhD is really hard takes a lot of self-discipline and perseverance and you also need to be able to communicate well and present complex things in a simple way. And they're skills that basically any company would really value from an employee. So, for me the transition was more about trying to take the broader skills that I had learned that I applied to a niche industry and then taking a few courses online to bridge just the minor things to help me jump from, you know, analysing a study on 20 rats or 20 subjects to say a company with like 100 million users. And that that jump is smaller than you might think. Especially with how easy it is to teach yourself things online. So, before I was an analyst, I was a trader at a sports book, so that was supposed to be a temporary job while I sort of tried to figure out what I wanted to do with my life and I just finished my PhD. And then I ended up staying at that company for five years. But overtime I just got better at understanding how to develop, how to re-focus what I'd learned into an industry use case. So, that was more working with bigger data tools and I taught myself those, you know, in my own time after work, and then just got progressively better and better. And you learn from other people and then you'd be surprised how quickly you can pivot into something else. And then once you have a little bit of experience like that, you could work anywhere. Like, I've worked as an analyst at a bookmaking company to detect credit card fraud, and now I work in marketing for a design company. So, once you make that that leap and you have those more generalizable skills, you can sort of take those anywhere. So, who knows where my next job will be? Could really be fairly anywhere.

Denise: Yeah, that's great! Matthew, can you tell me a little bit about what it was like to study your PhD in Behavioural Neuroscience?

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Matthew: See, I think that when I started my PhD that decision to do that that was really driven from passion, so I just really wanted to know how this thing worked, or this subject, I just really want to know more about it, and the PhD was away for me really channel that passion into something really productive and really useful. I've found that the environment of doing a PhD, if you find the right lab or the right environment, I just have such great relationships with other PhD students I did my PhD with. We're still friends now because we spent a lot of time together doing research and I found that the communal aspect with that environment to be really positive and I really enjoyed that. And I really enjoyed having an opportunity to explore a passion. I think that that's really critical for doing for doing higher research. The challenges of it, like you know, struggling with money. A lot of PhD students don't earn a lot of money. It's a lot of hours that you might have to work. And sometimes it can be isolating because you're in a lab for long periods of time, but passion really sustains you through that. So, if you're really interested in what you're doing, then it can really sustain you through those difficult times, those challenges where an experiment doesn't work the way you want it to, or it's not going in the direction that you thought it would. So, for a long time, I found that that passion really kept me going. It made it made like a great environment. But you know, just for me, over time that passion sort of faded and that's when I started finding it a lot more challenging, especially as I was trying to push to finish in a reasonable time frame. And that's when it became a bit more challenging, a bit more stressful, and I started to re-evaluate, you know, is this the career that I that I'd like to have? Because as interesting as it was and how much as much as I loved writing experiments, you know I found things like you know, grant writing, writing papers, and the pressure to produce in a short period of time in order to get you know more funding or to get contacts to get a new job on like a cyclical every few years sort of basis wasn't really where I wanted to take my career.

Denise: Yeah, so when you started your PhD, did you want to continue as a career in academics? Were you thinking about that?

Matthew: That was my plan at that time, yeah.

Denise: So, when you graduated with your PhD, how did you end up finding out about jobs like the role you have now?

Matthew: So when I finished the goal was to try and pivot into a different area of research. So, I took a job, I had a friend who worked as a trader at a betting company and he said they're hiring, so I applied for that job in the hopes of sort of looking for different research roles. So, I hadn't quite, you know, abandoned the idea of working in research. I just wanted to work in a different field. And I spent a bit of time looking for other postdocs, other research roles and didn't really find the right fit for me. While working as a trader, I sort of got more of a sense of, you know, the diverse set of roles that exist in finance or in that sector or in that industry and so while I started as a trader, I realized that I could excel at other areas of the business and I got exposure to that through that job. So, I pivoted from trading and my first role after trading was customer profiling. So, we spent a lot of time trying to understand behavioural profiles of our customers, so that had quite a lot of the psychology flavour to it, but also some analytics or analytics flavour. And then over time, I moved into more of a broader risk role. So, we looked at things like managing credit card fraud, identifying possible instances of money laundering. And we also developed models to identify and track potential problem gamblers, so I guess there's like a

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strong psychology and behavioural analytics flavour in a lot of those fields. Yeah, I think that my answer to your question would be I got exposure through just starting out in something and then I could see all the different ways I could take what I've learnt and pivot in a different direction.

Denise: Do you have any advice that you would give to a psychology student who is considering going on the PhD path?

Matthew: Um, I think that my advice would be consider the PhD is a stepping stone. But it doesn't necessarily have to be a stepping stone into a postdoc or into research or into academia. That what you're getting from a PhD is a very, very good training in critical thinking and also in analyzing data, interpreting data, communication. It's very that many places where you get training of that quality. And my advice would be that those skills don't just apply to a career in academia. That being said, a PhD is very challenging. It's something that you probably shouldn't enter lightly, in terms of there's a lot of self-driven work. You have to sort of, at times, find ways to self-motivate, to push yourself. You might not have a manager or a boss telling you that you have to be here at 9:00 AM or you have to do this. You have to sort of, you know, generate that discipline and you need to generate that yourself all of the time. And it can be taxing, because it's really hard to write a research paper. It's really hard to write a PhD, but not in the ways that you might think in terms of like difficulty in terms of execution. It's difficult not in terms of intellectually difficult, necessarily, it's more that it's difficult to sit there and actually do it. To sit there in front of a computer and just like when you can't think of what to write next and just push through that and get there. So, while I would say that you're definitely getting, you know, broad training in a lot of different valuable areas that a lot of different places would value, it can be tough and it gets stressful trying to trying to get there but I certainly don't regret doing it, even though I didn't take an academic path.

Denise: Thank you alright got one more question for you Matthew that was really helpful. Do you have any advice to someone who's thinking about a career in data analytics?

Matthew: A psychology degree is giving you a lot of the foundations for thinking critically about data, analyzing data. What you might want to consider is what are the tools that industry uses versus academia, to execute that. So, in your research or in psychology you might be dealing with a small number of participants and so analyzing that requires a different skill set to when you're analyzing a hypothesis test where you have hundreds of thousands or millions of users. So try and investigate the tools that are used in analytics outside of academia, and then think about how you can pivot the skills that you already have into using those tools for work. The gap is not as big as you as you might think. Yeah, the hardest part to learn really is not how, for example, to write code, it's knowing what approach to take to analyze data, and that's a skill that you would have developed in psychology. And that's the hardest thing to learn later. The writing the code is not the hard part.

Denise: Great thanks. Thank you so much for this Matthew. It's been really interesting talking to you. Thank you.

Matthew: Alright, thank you, nice to meet you and good luck with your research study. Thank you.