**STEM careers podcast series – Senior software developer**

**Sam Sinnamon**

#### *Sam Sinnamon is a senior software developer at Brisbane-based software development company TechnologyOne* *in Brisbane.  He graduated with a Bachelor of Information Technology from the University of Queensland and was a Prentice Scholar (he was in the top 10% of students) throughout his degree. He is a coding leader and developer mentor for Graduate Developers.*

**Announcer:**

This is a Queensland Department of Education podcast.

**Virginia Bowdidge:**

The careers that fall under the STEM, science, technology, engineering, and mathematics umbrella, are many and varied. In this podcast series, we talk to professionals working in some of these careers.

Hi, my name is Virginia Bowdidge, and I'm from the Department of Education and with me is senior software developer Sam Sinnamon. Sam, thanks for joining me today to talk about your career and STEM education.

**Sam Sinnamon:**

Thanks for having me, Virginia.

**Virginia Bowdidge:**

You're a senior developer with a software development company in Brisbane. What first sparked your interest in STEM and, in particular, software development?

**Sam Sinnamon:**

Since I was a kid, ever since I can remember, I knew I was really, really interested in computers and learning about how they work. So when I was a kid in primary school, I got involved in all the different possible clubs or groups that I could to just learn a little bit more about anything related to computers. And at that time, I started getting into video games as well, which were and still are really, really big. And started making little games in a program called GameMaker for my friends. So, so I did that in primary school. And then basically as I transitioned into high school, I started learning more and more about computers and programming and got as many books out from the library as I could to learn as much as I could about programming and anything to do with it. As soon as I worked out that you can make these little really cool things and solve problems for people using programming. I was kind of hooked from a very early age.

**Virginia Bowdidge:**

So it was your love of gaming that got you into development?

**Sam Sinnamon:**

Definitely part of that, yeah, 100 percent. It was basically just being able to make stuff. Being able to make games. When you played them with your friends seeing your friends enjoy the games and find all the little things you put in the games. That was definitely how I got started. And once I got a little bit older, if my mum was doing like a lot of data entry in Excel, for example, it was making a little program to make that easier for her. And then seeing how that obviously made things a lot easier for her and made her life a little bit better. Just seeing the reactions of people when you make the software for them.

**Virginia Bowdidge:**

And did you enjoy mathematics at school?

**Sam Sinnamon:**

I definitely enjoyed maths. Maths is a core part of programming. Algebra is basically the foundation for most programming, it's something that I use every day in my work. I did subjects like physics as well. If you get into simulation programming or even games programming, physics is another subject that you would use every single day. Because when you're making games, you're trying to simulate real life and you need to know how things work in real life.

**Virginia Bowdidge:**

So what did you study at uni?

**Sam Sinnamon:**

So at university I studied Bachelor of Information Technology and that was at University of Queensland, and that's a pretty broad degree. And basically I took as many subjects as I can that will focus around programming and learning about algorithms and data structures and those types of things. And it was kind of in uni where I decided what direction I was going to take my programming. Because I always knew I wanted to do programming, but there's so many different things you can do. Like I was saying before, you can do games programming, you can do simulations, you can do what I do, which is write enterprise software, write websites. There's so many different things you can do and so I decided that I was going to go into making enterprise software, so software for thousands or hundreds of thousands of users.

**Virginia Bowdidge:**

How did you get your first job in the industry?

**Sam Sinnamon:**

So basically, in my final year of university, I started applying for different internships at big companies, and one of those companies was TechnologyOne, which is where I started. And that was a really, really good experience to get exposed to what a software developer does every day and actually meet real software developers, and see how the whole thing worked. And from pretty much the first day that I entered the office, I was absolutely gobsmacked at the facilities that they had at the Tech One. Like you see these videos online about what it's like to work at Google and stuff. And I didn't think that we'd get anything like that in Australia, let alone in Queensland. And TechOne, they had a breakfast bar and they have video game consoles in the office and stuff. And so from that first day on the internship, I knew that was where I wanted to be.

**Virginia Bowdidg**e:

So what does a typical day look for you?

**Sam Sinnamon:**

I'd probably get breakfast to start off with, so get breakfast at the breakfast bar. Then I guess I'd start by talking to my team so we have what's called a stand-up. Where in the morning we basically talk about what we did yesterday and what we're going to do today. I spend a lot of my day collaborating with my teammates and trying to come up with the best way to solve problems because the first way that you come up with is usually not the best way. It's important in programming to think through what you're doing before you do it. So I spent a lot of time trying to work out what the best way to do something is. And then, obviously I spend a large portion of a day actually programming as well. At lunchtimes and stuff will be using the facilities of TechOne like the video game consoles and the pool tables and stuff like that, which is pretty awesome.

**Virginia Bowdidge:**

That sounds like good fun.

**Sam Sinnamon:**

Yeah, absolutely. Yeah.

**Virginia Bowdidge:**

So what is it about your career that motivates or inspires you?

**Sam Sinnamon:**

It would be that programming can take something that's really, really hard and labour intensive to people and make it easier for them. So some people are scared of programming, or programs taking away people's jobs. But I think that much more than that, what it's about is just taking away the bad parts of jobs. So all the monotonous stuff that people do, where the time could be spent elsewhere that's what I'm really, really interested in and love to make easier for people. If I can take away some of the worst parts of what you're doing and make it easier for you, and you can spend more time doing the fun parts of your job, that's really what I think programming is all about. So it's basically just making people's lives easier and basically solving puzzles. I love games. I love puzzles and trying to work out how to take a program from scratch to fitting those gaps and solving those problems. It's basically just a giant puzzle, which is really fun.

**Virginia Bowdidge:**

Could you give us an example of that?

**Sam Sinnamon:**

One of the projects that I did at university was working with one of the divisions, the biology division at university. So their problem was that they wanted to monitor thousands and thousands of plants and the status of all of those plants at the same time. So like the soil temperature, the moisture and stuff like that. So that sounds like an impossible problem to start off with. How do you do that? We kind of had to break that down into smaller and smaller parts. We ended up building this little sensor thing that you could attach to the plants, and that would send the information up into the internet.

And then we had to develop the interface for people to be able to actually use that information and look at it. So it was taking this impossible problem and then breaking it down into smaller and smaller chunks until you could actually make something that gets solved people's problems.

**Virginia Bowdidge:**

So what has been the highlight, do you think of your career-to-date?

**Sam Sinnamon:**

Programming is always about learning every single day and learning a little bit more. So I guess working at Technology One has been awesome for me because it's been a place where they're really passionate about that learning and that growing. Being given the opportunity to basically develop my skills, learn from really, really senior people. And that culminated in the fact where I was able to actually run a graduate program myself to train out some new grads that came in from university. So that was really rewarding to be able to go from graduate to someone who was training the graduates.

**Virginia Bowdidge:**

Yeah, that sounds fabulous.

What advice do you have for high school students interested in a career in STEM?

**Sam Sinnamon:**

Just jumping in and give it a go. Programming is something that's the intrinsically, like I was saying, it's just about taking those complicated problems and breaking them down into smaller and smaller things. So learning programming or getting into it might seem like an insurmountable obstacle, but when you break it down it's just about having a go. So if you fail on your first go, next time you try it, you'll get a little bit further and then you'll get a little bit further until you're finally actually solving problems and able to write stuff. So it's just about jumping in and giving a go really.

**Virginia Bowdidge:**

And not being afraid of making mistakes.

**Sam Sinnamon:**

Absolutely. Yeah. And with that as well, it's really important to take opportunities that come up. I was asked to basically go overseas by myself and go to another country. And that was something that was really kind of intimidating for me at the time. And I'm looking back on it's just kind of a really rewarding experience for me. And it would have been something that I missed out on if I didn't take that opportunity.

**Virginia Bowdidge:**

And is there anything else you would like to add?

**Sam Sinnamon:**

The biggest surprise for me, and I guess the biggest thing that I want to get across is that you don't have to go to Sydney or Melbourne or overseas to have a great career in programming and coding. There are awesome companies in Queensland, like TechnologyOne, which was actually founded in Queensland, the headquarters are here. And that's one of many other companies as well, where you can actually have a really rewarding career right here in Queensland. So that's something that surprised me. I always figured that I would have to go overseas in a way to be able to really expand myself. But there are enterprise level companies like TechOne with thousands of employees that service hundreds of thousands of customers based right here in Brisbane. So definitely don't count out working in Queensland.

**Virginia Bowdidge:**

Thanks very much for your time, Sam. It sounds like you have a very interesting job.

**Sam Sinnamon:**

Absolutely. It's new stuff every day, so it's pretty interesting.

**Virginia Bowdidge:**

Great. Thank you.

**Sam Sinnamon:**

Thanks Virginia.

**Announcer:**

You have been listening to the Queensland Department of Education podcast.