

CyberFirst Podcasts

An inside view of Cyberfirst: Bursary student edition transcript

[00:00:00] Michala: Cyber security. It's just a code to some computer science students, right? Wrong. Our podcast created by CyberFirst is here to show you how you can succeed in this fast-growing industry even without a tech background.

In today's episode, we're exploring the CyberFirst university bursaries and taking a look at everything from the work students do to the type of companies that they undertake placements with. I'm Michala, a CSO advisor and information governance and cyber security consultant. Today, I'm joined by--

[00:00:35] Jane: Hi, I'm Jane. I have just graduated from a degree in mathematics and I have secured a job through the CyberFirst bursary scheme.

[00:00:42] Arron: I'm Arron. I studied computer science at university and I'm currently studying a master's in cyber security. I've also secured a graduate role through the CyberFirst bursary scheme.

[00:00:49] James: Hi, I'm James. I'm studying computer networks in cyber security at university, and I'm currently on a summer placement as a CyberFirst bursary student.

[00:00:57] Michala: In this podcast, we'll be talking in detail about the CyberFirst bursary scheme and the opportunities available within. Now, I know you're at the start of your cyber careers, but I want to test your knowledge to see how much you've actually learned during your summer placements.

I'm going to read a list of questions and I want you to see how many you get right. No pressure. Let's get started. What does the S in HTTPS stand for at the beginning of a URL?

[00:01:27] James: The S stands for secure. We use digital cryptography to secure communications between a client and a server.

[00:01:34] Michala: Excellent. Thank you. Next, what's a phishing attack?

[00:01:38] Jane: This is when you get an email that encouraged you to click a link and then give away all your credentials.

[00:01:44] Michala: Yes, absolutely. How about smishing attack?

[00:01:48] Jane: This is when you get a text that also is looking for all of your credentials.

[00:01:53] Michala: I think this might be one for Arron. Let's see. Can you name four different coding languages?

[00:01:59] Arron: C++, C#, Java, and Python.

[00:02:02] Michala: Not a problem for you. Excellent. What is a POS attack?

[00:02:06] Arron: Is it a point of service attack?

[00:02:08] Michala: Close.

[00:02:09] James: Point of sale.

[00:02:10] Michala: Point of sale. Absolutely. What makes a secure password?

[00:02:16] Arron: Three random words.

[00:02:17] Michala: You're quite right. Next, turning off the GPS function on a smartphone prevents any tracking of your phone's location, true or false?

[00:02:29] Jane: False.

[00:02:30] Arron: I think that's false.

[00:02:31] James: Yes, false.

[00:02:33] Michala: People often think that student's summer placements include a little shadowing and a lot of admin. To each of you, what have your experiences on placements really been like? What kind of work did you take on and how did the course benefit you when you went back into university?

[00:02:51] James: During my first year, I was on the CyberFirst academy. In my second year, I have just begun my summer placement as a CyberFirst bursary student.

What was really a surprise is how quickly you were able to really get active in active work that's going on but then also have another support there. You were allocated a point of contact in which organization you go to work with.

Being able to have that support there and have a really supportive team that's something which I have found is-- I've been very thankful for.

[00:03:22] Michala: Thank you. That's great to hear. How about you, Arron?

[00:03:26] Arron: My first summer placement wasn't on the academy. It was with IBM. IBM took on 30 people, 24 of which, I think, did an IBM academy and 6 of which went on work. I was a part of the group of six that went on to work.

There was an aspect of shadowing, of course, because you've got to get up to date and learn what you've got to do, but after the first few weeks of shadowing, it stopped. You were on your own doing your own work, set your own tasks.

Then my second summer placement was with Hertfordshire Constabulary. With that, there was no shadowing. Essentially, I was given a list of tasks and told to get on with it and ask

for help if I needed it, which was really good because you got that independence that you didn't always get. It was really good experience. Actually, I really enjoyed it.

[00:04:11] Jane: In the year prior to joining the bursary scheme, I did a placement down in Cambridge. It was shadowing just to get used to the software we had to use. I did a lot of email-related security and I was told I had to make up the sort of system, and teaching, and educating the staff with the cyber team on how they should read their emails and what to look out for.

Even after less than weeks of shadowing, first few days, they'll then hand the reins over to you, maybe watch you do it just to make sure you're not clicking on the wrong things and maybe exposing yourself to anything, but then I was given the reins from there. Even on the academy, although you've got to attend classes, you're given the option of doing it on project.

I teamed up with six other students, and we created our website that teaches mathematics for cryptography. We weren't given any help. It was totally down to the six of us pulling in our knowledge and our experience and then we got to present that to the rest of the CyberFirst community at the end.

[00:05:18] Michala: That's brilliant. How have you managed this financial side of things? Have you had any support at all?

[00:05:25] Arron: The CyberFirst bursary gives you £4,000 to help with that as well as £2,000 for the summer placements. That has been brilliant. That's been really helpful. That's money that you can spend on improving your computer or buying a laptop, that you can use at university.

It also alleviates the stress of budgeting to an extent. Obviously, you still have to budget your money, but you don't feel the same pressure as someone that doesn't receive the bursary, I suppose.

[00:05:50] Jane: I'm relocating about six hours away from home from my new job. It's actually allowed me to buy my first flat, so I'm very excited of it there. I wouldn't have had that had I not attended the bursary scheme.

[00:06:02] Michala: That's wonderful. Brilliant. I'm really quite impressed by that.

[00:06:07] James: For me, the bursary it provides £4,000 per year for the years which I was studying at a university on the scheme. Which, for me, really helped in the sense of I didn't have to, say, find a part-time job on the side and then take time away from spending time more, I could be studying and taking up new learning opportunities.

Particularly during the academy and summer placements where we have a £2,000 payment, that was incredibly beneficial because we could spend all of our time and focus really on taking as many opportunities as we could.

[00:06:44] Jane: I think that's the key, it's taking on all the opportunities that are offered and it does give you the freedom and the flexibility to go searching for maybe getting qualifications you wouldn't normally have had access to.

[00:06:55] Michala: Let's just take a quick break and get to know you all a little bit better by playing a quickfire game. We're going to play a round of 'would you rather'. I'm going to read a list of statements and I want you to answer which you'd rather do or have or see for example without thinking.

Your first reactions. Your initial reaction. Then I'm going to ask you to explain why. Are we ready?

[00:07:22] Jane: As all, we would be.

[00:07:24] Michala: Would you rather work alone or in a team?

[00:07:27] Jane: Team.

[00:07:28] Arron: In a team.

[00:07:28] James: Team.

[00:07:29] Michala: Everyone's for a team. Tell me why.

[00:07:33] Jane: You can't have all the ideas. You're only stuck within your small box. Having other people tell you what they think and why they think, that's actually really beneficial and it helps you to think in a different way as well.

[00:07:45] Arron: Absolutely. Bouncing off each other's ideas is the best way to work in my opinion.

[00:07:49] Michala: Yes, I agree that you can achieve more together than you can alone. Next then, would you rather be the coder or analyst?

[00:07:58] Jane: Analyst.

[00:07:59] Arron: Coder.

[00:08:00] James: Coder.

[00:08:02] Michala: [laughs] You've said analyst really quickly. What did you say analyst?

[00:08:07] Jane: I'm a mathematician. I like facts, data, and logic.

[laughter]

[00:08:12] Michala: Are you inferring there that coding doesn't have logic?

[00:08:16] Jane: It does but I like talking to people and trying to problem solve and not be attached to just the screen. I do teach coding so I do understand it and what you would have to do, I just don't like the idea of just sitting at a computer all the time.

[00:08:31] Michala: Why did you both say coding straight away as well then?

[00:08:35] Arron: I said coding because previous experience with the web development stuff. I've really gained my interest. I really enjoy doing that. It's the problem solving that you get from that or if you've got a task when you're programming or coding.

Once you finish that task and it works properly, you know you've done that and that's something that you've made and you can take ownership of that. That's a really good feeling.

[00:08:57] James: Absolutely. I definitely second those, guys. It's really creative as well. When you're trying to complete some job, there's always more than one way of doing it and just exploring how somebody else would do that same task as well. Just comparing it, really valuable.

[00:09:14] Michala: I think a key thing for anyone listening is that, find what you enjoy, what excites you in this field and you can problem solve and all the other things in that, so in terms of the skill set, but find out what excites you.

Here's an interesting one. Would you rather be a penetration tester or a vulnerability specialist?

[00:09:38] James: Vulnerability specialist.

[00:09:40] Arron: I think I'd rather be a penetration tester.

[00:09:42] Jane: I think I might agree on penetration tester purely because of some of the stories I've heard. They say it's really exciting, I'd love to break into a building. [chuckles]

[00:09:50] Arron: Definitely. Penetration tester isn't really just doing a computer also, physical testing or, access systems and things like that. It's a wider thing probably.

[00:10:02] Jane: Yes, it is.

[00:10:03] Michala: Would you rather have a placement in tech startup or with a big multinational?

[00:10:08] James: A startup.

[00:10:10] Arron: I think for me it would be a big multinational just to begin with. I feel as though you would have more support or there would be a wider support network if you're a big multinational and then who's to say that you couldn't move to a tech startup in the future.

[00:10:22] Jane: I totally agree. You can get a lot of support teacher mentorship from maybe a bigger company than you would from a smaller company that maybe doesn't have the resources. You could learn all the skills that you can and then move across.

[00:10:35] James: I think that with a startup, you're going to be in possibly a much smaller team where you're going to find that-- In a big organization, you're going to have so many

different departments are covering so many different sort of activities, which you might not be able to be exposed to otherwise.

I think that being part of a startup, you have to get involved of everything and be very active. Not saying that you don't have to be able to have in a big organization, but you might not have the same exposure to certain activities, whereas things might get delegated in a startup.

[00:11:06] Michala: Excellent points. I very much agree with you. For people who are generalists, that's a wonderful approach. Could you tell me about how the program's impacting your future? Are there any particular skills or lessons that you've learned that you think will be invaluable in the future? How about Arron kicks off?

[00:11:25] Arron: I think the soft skills gained, brilliant. You get the opportunity to network with a group of 400 students that are on the bursary scheme works, it might be more than that now. You also get the networking from your summer placements and the networking is the big thing for me.

[00:11:44] James: Yes. I'm with you, Arron, on all of those points. Just being part of that community is really great. On the academy as well, we get placed in small groups where we could communicate and work together.

During our classes, we could all chip in if somebody had something to say or something to ask, and then sometimes you might find that somebody would say something and another student will pick that up and then they could give their insight as well.

Just having access to that community of again, around 400 students, if you have a question or there's some sort of research project that you're working on, chances are that somebody else in there too has had that interest, and they have something that they can bring to the table.

[00:12:25] Jane: I completely agree. For me, coming from a non-related security degree and also doing most of it throughout COVID, is that being able to talk to people and being able to ask for help, sometimes you feel, "Oh, my goodness, I don't know anything. I'm sitting in this bubble by myself. I don't go to university with anyone studying the same thing as me. Why am I here?" I think being able to reach out and say, "What do you know, how can I learn from you?" is really invaluable.

[00:12:54] Michala: Absolutely. That doesn't stop and it's all the way through your whole career in cyber security, because I'd say you learn something new every day. On the bursary scheme, students don't only experience the incredible learning opportunities, but you've talked about, obviously, the collaboration as well. Now, what advice would you give to future students to make the most of the bursary?

[00:13:16] Jane: I would say, say yes to as much as you can. You're only going to benefit.

[00:13:21] Arron: Absolutely. Don't be afraid to ask for help as well. The community is very busy. Lots of people talk a lot. It's already been mentioned, but always ask for help if you need it.

[00:13:32] James: Exactly. Explore, just explore. There's a lot of channels in this community. There's so many different interests which are shared by so many people. I would just say, never hesitate just to say, "Can I join in on that?" Or, "Can I just understand what work that you're working on?" People are always happy to help and get some new people involved.

[00:13:50] Arron: Definitely. My other piece of advice would be to do varied placements. Don't try and do the same placement twice, try and experience different areas of cyber security in your placement so you can try and figure out what it is you want to do.

[00:14:03] Jane: That's good advice.

[00:14:03] James: Absolutely.

[00:14:05] Michala: Excellent. I agree with you. Now, we could talk a whole lot more but unfortunately, we're actually out of time already, and we've only just started to scratch the surface of the CyberFirst bursary scheme.

If you'd like to know more, head to www.cyberfirstcareers.co.uk to read about the CyberFirst early career programs. A huge thank you to all our guests and thank you to you for listening, as we open up the wonderful world of cyber security.

[00:14:33] [END OF AUDIO]