

CyberFirst podcast
'Opening up our opportunities' transcript

00:00 **Anne Marie** – Cyber security. It's a fast-growing industry with roles that protect the UK and skills that will always be in high demand, but how can you get your foot in the door, even if you have never studied tech before? In this podcast we talk about the two different routes that CyberFirst offer, the university bursary and the degree apprenticeship, and how their training, support and opportunities with industry members can help kick off a brilliant cyber security career. And there's a bonus, if you can't decide between the schemes you can apply for both. I'm Anne Marie from Stemettes and I'm joined by...

00:36 **Emma** – I'm Emma, I work in the comms team at the National Cyber Security Centre, part of GCHQ.

00:41 **Amy** – I'm Amy, former GCHQ apprentice and I work within the CyberFirst team.

00:44 **Michala** – I'm Michala, I'm head of governance and security at Marie Curie, the UK's leading end of life healthcare charity, and we are also one of CyberFirst's industry members.

00:54 **Anne Marie** – And additionally, I'm joined by Ethan and Olivia who are two of CyberFirst's current bursary recipients.

01:00 **Ethan** - Hi, I'm Ethan and I study computer science at university, I'm currently doing a year-long placement that was organised through the CyberFirst bursary scheme.

01:06 **Olivia** – Hello, I'm Olivia, I'm graduating university with a chemistry degree this summer and I have secured a graduate role with the CyberFirst bursary scheme.

01:16 **Anne Marie** – When you're a young person thinking about your options at the end of school, or the start of university, there are a lot of different options out there. Amy, could you tell us the key facts of the CyberFirst university bursary and degree apprenticeship, and what makes them unique as career options?

01:32 **Amy** – So I decided to do the, what is now the CyberFirst degree apprenticeship, because I have never been someone who is particularly good with exams or writing long essays and reports, so I thought learning on the go, learning practically was much more my kind of style, and I think alternatives to university suit a lot of people. Similarly, if university is more your style, lots of people do that for the social aspects as well as the learning style. The bursary is also a really good option, as Anne Marie said before you can apply for both, so there is no need to choose, being able to earn some money whilst you are learning is a really really good option and gives you a head start that other people who are doing an ordinary degree may not get. You have lots of work experience throughout both to give you different tasters of things you might enjoy within cyber security and within GCHQ, as well as our industry partners. Being able to get those tasters in advance was really useful for me as I decided to do computer science on a bit of a whim, and I didn't know what I wanted to be

when I grow up – I still don't know what I want to be when I grow up, and I think being able to get those little snippets of experience helped me to make some really informed choices in those areas.

02:53 **Anne Marie** – I think you've definitely got all the options and you can taste all of them and eat all the cake, I think that's probably the way we want to summarise it! The university bursary programme is open to everyone, and designed to help young people from all backgrounds get the same platform to launch a cyber security career. Ethan and Olivia, how have you been supported by the CyberFirst team in the achievements you've made so far? And would you say this programme is open to everyone?

03:21 **Ethan** – I've been lucky enough to work closely with the CyberFirst team so I've spoken to them a lot about what I am interested in, and similarly to Amy I have no idea what I want to do when I'm older, I came into it thinking you had to pick one job and you'd have to find that, love it and that's what you do for the rest of your life but the good thing about the CyberFirst team is that they are constantly offering different placements or events, if it's just a day or a weekend, because you're getting a bit of money to do the bursary as well, you don't have to say no, you can do a bit of travel if you need to or buy resource or whatever it is. I've said yes to things like that, like doing workshops with young kids trying to get them into cyber security, or in terms of placements being able to go to the academy or move down and have accommodation to learn about different things. All that stuff has been taken care of for you, a lot of people might take that for granted if they just saw what there was to offer, but the team is always on hand to answer any questions. They do so much stuff in the background, so whatever you want to do, as long as you talk about it, they will find a way to make it work. It's very flexible, anybody who thinks they are going to be pigeonholed into something, don't because you can constantly change your mind about what you want to try out.

04:36 **Olivia** – Yes I completely agree with you there, the amount of opportunities within the placements or academy, but also outside as we've mentioned before, it is a real community and you can have discussions within that community and people will give you recommendations whether that be online courses or I've been lucky enough to be able to go to conferences with CyberFirst, so cyber security conferences which has opened up networking opportunities for me and following on from that the careers fair has been a big positive for me, meeting potential employers, so there is a lot of support out there. If they can't, for whatever reason place you somewhere they will try and find an alternative, this year with Covid the team have done everything they can to help everyone get a placement which is so lovely to see. I would say the programme is open to everyone, from whatever background, both academic or just culturally I would say it's open to everyone.

06:03 **Anne Marie** – it's great to hear those experiences from both of you, and that even though you're on the same bursary scheme, that has ended up meaning different things to both of you. Also, it seems like it's quite tailored and flexible, and about you finding your own path. Thanks for opening up about your experiences on the bursary. I think hearing Olivia's journey as well, one thing that really strikes me about this scheme is that with pretty much every other grad programme you are only working with one employer, but with CyberFirst bursaries you have the chance to work with a network across a whole broad

range of industries and government members, so you get a much more varied experience. Emma, could you tell us about a few of the employers in the CyberFirst network, and why it is so important that CyberFirst offers experience with these industry and government members?

06:54 **Emma** – Yes, there are hundreds of employers in the CyberFirst network, it's a really big pool and as people have highlighted already, there is a lot of variety in that group. There are some really big employers, some industry household names, going down to very small companies, and I think that variety is so important, especially the ability to work with many companies during your CyberFirst experience, just because all employers are different, bigger employers can be different from smaller employers, and many people find they have a niche where they are most comfortable or perhaps they want to do one thing and then try another thing, and just want to try out all different things. So, this gives people the opportunity to do all of that, to move around all different places and try out a number of different experiences to see what works. Heaven forbid, we hope people never have a bad experience, but if they did we hope they wouldn't go away from that thinking that's what the whole cyber security industry is like saying 'no that's it, that's not for me' that would be dreadful, this gives people an opportunity to try out different things, because some things are going to work better than others. So why it's important we offer those experiences? I think for all the reasons people have said so far, but the main one is that it's a good way to try and improve the diversity and inclusion of this group, people have always been able to get industry placements or internships but it can require a personal connection and can rely on who you know. It can mean someone giving you a foot in the door through a personal connection which limits the diversity of the group, so this is a balancing factor for that and means more people get that same opportunity that they are just as worthy of.

08:36 **Anne Marie** – Michala from Marie Curie, can you tell me about how your organisation is involved with CyberFirst, and the opportunities that students have found with you?

08:46 **Michala** – One of the great things about Marie Curie is that it is really evident that we care about cyber security, and that the senior management do invest in it. Really this is about a way of giving back to the profession and also helping to blow some stereotypes, a lot of people don't realise that some charities are also targeted by some cyber criminals, and we, just like most businesses need to protect that. So one of the things that is particularly useful for our students at the moment is that moment is that because we are not a huge organisation, but a large one compared to some, as we've only got two teams in security, so my team are on the informative governance side dealing with governance and compliance and then the IT security side which is more hands on dealing with what comes in day-in day-out, the great thing is they can experience both sides of that and look and very quickly get an understanding of things we do, to help keep the organisation safe and find out for themselves which bits they enjoy and which bits they don't. A benefit of a placement with someone like us is being able to do that, whereas at other places, say large organisations that have dedicated teams, they might need to do a series of placements to get that same experience. One of the great things about the placements that I've been surprised by actually is the unexpected benefit it has had on the teams, so the enthusiasm and drive that we've got from the students, bringing in those fresh eyes and the creativity has been a really positive thing for the team.

10:34 **Anne Marie** – thank you Michala. Ethan and Olivia from the bursary scheme, which industry members have you worked with so far, and how has that access to industry and government broadened your experience?

10:46 **Ethan** – So I've worked with government departments, so the Department For Work and Pensions for a similar placement doing analyst work, and then now I'm with the NCSC sitting not too far away from the CyberFirst team, and so although I haven't worked with industry, private sector partners as such I've had interactions with them whilst doing work. I know that in government it feels very much like a team going towards one goal to create a safer place to live and work with the NCSC. That is a really nice feeling of getting up every day and working because whatever job you are doing, you're having an effect. Especially in the times of coronavirus and everything, you want to be doing your part. Having said that, the same thing with private sector, we have a lot of relationships with private sector and academia who always have insights of things that we can do better and vice versa, so it's good to have that range of contacts. And like Olivia was saying before about the careers fair and being able to meet different partners, and get those different contacts if you fancy doing a placement with them in the future, or you think I need to get some more information about this for my current job I know someone from there, like CyberFirst is one of the only places I can think of where if you get in, those doors are open for you. Otherwise, it's very much you have to know a mate whose dad knows somebody he worked for in the past who works at IBM or something like that. It's just there and if you are willing to send messages and look for it, all the information is available to you. I'm not sure Olivia if you felt the same, you probably have more experience with industry than me.

12:32 **Olivia** – I completely agree, so I do have a bit of private industry experience, I started off at Lloyds Banking Group which was really helpful, just seeing all the different departments and teams, and as mentioned before, it was incredible to see so much variety and flexibility but I would also like to point out, following on from Ethan with the careers fair, even just going to interviews and assessment centres with the industries and government partners has really opened my eyes and gave me a valuable insight into how they work, the different types of people and how they run and do things. That was really good for me, it lets you evaluate all the different types of roles and companies you could be working with. I would say, as a bit of advice just keep your eyes and your mind open, because you never know what you might stumble across, maybe consider applying because you never know what might come out of it.

13:42 **Anne Marie** – you have to be in it to win it, I guess that's the appropriate term for that. For security reasons, we can't interview current degree apprentices on our podcast, but fortunately we do have a former apprentice in Amy, who now works within the CyberFirst team at GCHQ. So, Amy could you tell us a little about why you think degree apprenticeships are so valuable as an experience and how doing one has shaped your career?

14:08 **Amy** – Definitely yes, I think when I say to my friends who took more traditional academic routes that I have effectively been at the same employer since I was 18, they say

'Aren't you getting bored? Don't you want to try something new?'. But what that has meant that since I graduated from the apprenticeship, I have actually done 4 different roles with quite different responsibilities, different things that I need to deliver using different skills I learnt on that apprenticeship. It's amazing how often those skills do still come up. All those different modules we did, we were trying to become jack of all trades, master of none so they could plug us in wherever we might want to be within the organisation, and we could find our own spaces like that.

14:59 **Anne Marie** – And another question for you Amy, the CyberFirst degree apprenticeship offers a cyber security degree as part of the programme. What would you say to someone who is deciding whether to do a degree apprenticeship or a bursary right now?

15:15 **Amy** – I think it's tricky, it's a tricky decision there are valuable parts of both. The thing that helped me to decide to do an apprenticeship was how much I hated writing essays, it's something that many of us suffer from. Some people can get stuck in and write a report on something, I had people that I knew at college that loved doing coursework, but I'd much prefer to build something, do something practical, learn on the job and learn as I go. That's much more my style, so I think having a bit of introspective time to think about how you like to learn and where you might want your career to go. If you do a degree in computer science for example there are lots of different things you can do with that, but for me being on the apprenticeship and being accepted onto a role as soon as I graduated helped me to know what I like and what I don't like. For me it felt like there was a lot less searching, because I was already with the organisation, there are so many things you can do, so I was a security architect to begin with and then I was in a couple of different research roles, before I found my outreach and tech support position with CyberFirst. So, it really is quite a mixed bag. Having a think about what you might like to be is only one part of it, how you might like to get there is just as important!

16:58 **Anne Marie** – So it's time for a quick-fire round. There are so many opportunities for a young person trying to get into cyber security. But in 20 seconds, what would you say are your top three tips for applying. The rule is, no repetition, so if someone says your answer then think of a new tip. Who wants the first 20 seconds?

17:24 **Ethan** – Be honest, about your skills, your level of experience and what you're worried about, they'll be able to help you out. Put across that you are passionate and willing to learn, even if you don't know something, don't just say you're not interested and do one-word answers. Just say you're willing to learn, that's what they are looking for. And, don't worry thinking that you're going to be put in a box and stuck in this one role forever, because it's just to get your foot in the door, once you're in you can change. Look into as many jobs as possible!

18:14 **Anne Marie** – Your third top tip didn't quite make it into the 20 seconds, but still no one's allowed to repeat it. Who's next?

18:15 **Olivia** – Show you've done your research, so include examples from recent news articles, and also just go for it even if you think you can't do it, just do it. Show your

enthusiasm in cyber and maybe link to potential industries or roles you might want to go into.

18:47 **Anne Marie** – Also over 30 seconds, but still three valid top tips, thank you Olivia.

18:58 **Emma** – Maybe if I try to do two tips it'll fit into 20 seconds. Ok be very suspicious of places with very excessive job requirements, like if they want 20 years of experience in python or whatever. Be suspicious of any interview where you are required to write code on a whiteboard, that's my main tips.

19:32 **Anne Marie** – With six seconds to spare! Be suspicious is maybe the third top tip on its own.

19:33 **Emma** – Just be suspicious of anything at any times, yes!

19:35 **Anne Marie** – Great, thank you Emma. Who's next, Amy maybe?

19:41 **Amy** – Number one is to apply even if you think you don't meet all the criteria, that is really important, because you'll meet a lot more than you think you do. Tip number two is to speak to everyone, something I learnt on the apprenticeship is having contacts on loads of different teams is a really useful thing to have. I've probably run out of time and I can't think of a third tip!

20:12 **Anne Marie** – You have, yes! Michala can you show them how it's done?

20:18 **Michala** – I don't know about that! Ok so my top three tips then, one – have an insatiable sense of curiosity and show that. Also demonstrate your integrity as a person, and absolutely ignore job descriptions, they are just wish lists.

20:37 **Anne Marie** – Thank you Michala. We have run out of time though, I don't know about you, but I am definitely ready to apply after that. If you would like to know more about the university bursary and degree apprenticeship schemes, head to <https://cyberfirstcareers.co.uk> where you will find everything you need to know to find out which programme is right for you, or why not just have your cyber cake and eat your cyber cake and apply for both. Thanks to all our guests and thanks you for listening, as we open up the world of cyber security.