Daniel Byers BSc (Hons) MSc

Over the past decade, I have acquired a wide ranging and deep understanding of programming techniques and languages. Whilst I do have specialised knowledge of individual technologies, I prefer to focus on understanding the fundamentals of language design so as not to be restricted by a single way of thinking. A multitude of projects have been completed, ranging from a compiler written in Java, through a toy ransomware written in Python, to several small modules for the Linux kernel. I am currently working as a Linux Sensor Developer, with additional strategic research tasks that I have taken on as extra responsibilities. My role is to research and develop methods of detecting malicious activity on Linux servers through passive monitoring and active scanning. Recently, I have been improving current capabilities (and adding new ones) by implementing eBPF support into the product.

Cybersecurity to me is simply "Computer Science implemented correctly"; a crossroads for many aspects of Computer Science in an interesting and fast paced environment. I enjoy both the technical and non-technical, offensive and defensive, aspects of security, although I have a predisposition towards a blue team environment. During my tenure at AlertLogic, I worked as a security analyst in the Threat Security Experts team, which was the core of the security operations centre. My daily tasks included incident response, remote administration of network IDS sensors to tune signatures or remediate health issues, performing investigations to aid customers during active breaches, managing a busy ticket queue, analysing logs for anomalies, making and receiving calls with customers, developing improvements to the processes, building automation tools, and more. This gave me the chance to hone the skills that I built during my Masters in a live environment, and I did very well at it.

A lifetime of computer use has given me a strong set of problem solving abilities when using modern operating systems. Initially in Windows, but for the last ten years mainly in Linux. Now, most of the systems in my network are Linux-based, and I run Linux on my work machines, so am comfortable scripting in Bash/PowerShell, and thoroughly enjoy automating manual tasks. I have a love of operating systems theory, and enjoy learning about the internals, or experimenting with advanced features.

I learned a lot about computers during my formal studies at university, covering a wide range of topics. This has given me an understanding of systems in many scenarios; from networking to databases, artificial intelligence to penetration testing, web development to embedded systems security. For my Bachelor's placement year, I completed a nine month internship at New Zealand's biggest Cloud Hosting provider. Whilst there I learnt, and became proficient with, Ruby and the most popular web frameworks: Rails and Sinatra. During my Master's, I accepted an internship to produce a prototype implementation that records I/O in virtualised environments. This prototype was a command-line interface entirely written in C, developed to run on Linux. Both internships resulted in offers for full-time positions.

I am a very quick learner and have no reservations about admitting the limitations to my knowledge and/or asking for help when required. In fact, I like to be the least skilled person in the room so that my potential for learning is maximised. This does not mean that I shy away from teaching; having to pass on knowledge is the best way to highlight gaps in my own. To this end, it is common to find me engaged in discussion with colleagues after they have sought my assistance. I realise that I am human and will make mistakes, so am not afraid of accountability. I enjoy watching (and attending if possible) talks/conferences related to computing and participating in group meet-ups/Hackathons. Overall, I have a wide knowledge and passion for computer theory and operation, with confidence that anything I don't know, but need to, I can learn. Outside a virtual domain, I am an avid reader, enthusiastic gamer, novice Japanese speaker, and eager world explorer.

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Bright, talented, natural problem-solver with excellent self-discipline and the ability to work with the minimum of supervision, under pressure, and well within a team. Care is taken in any situation to ensure quality is delivered and correct focus is placed on priorities in complex environments.

Key Skills

Ruby, Python, PHP

C, C++, C#, Java, Rust

Assembly

HTML, CSS, JavaScript

PostgreSQL, MySQL

BASH, PowerShell

Linux, Android, Windows

Networking

Penetration Testing

Incident Response

Malware Analysis

Cryptography

Digital Forensics

Artificial Intelligence

Cloud Engineering

Basic Japanese

Education & Qualifications

Cyber Security Analyst+
   CompTIA, August 2022

Cyber Security MSc
   Passed with Merit, University of Birmingham, September 2018 – December 2019

Computer Science BSc
   1st Class Honours, Manchester Metropolitan University, September 2013 – July 2017

Access to Higher Education Diploma in Computing
   Passed with 8 Distinctions, 4 Merits, Lincoln College, September 2012 – July 2013

General Certificate of Education (Advanced Subsidiary)
   English Literature and Physics, September 2008 – July 2009

'Design and the Web' Certification
   Open University, 2008

General Certificate of Secondary Education A-C
   English*2, Maths, Science*2, ICT*2, Design Technology, RE, Business, Cordeaux High School, 2004 - 2007

Employment History

Senior Linux Sensor Developer
   WithSecure, September 2021 – Present

Cyber Security Analyst
   AlertLogic, April 2020 – August 2021

Software Developer
   Seamless, June 2019 – September 2019 (internship), October 2019 – April 2020 (employee), June 2020 – November 202 (consulting)

Software Developer
   Umbrellar Cloud Hosting, Auckland, New Zealand, September 2015 – June 2016 (internship), June 2017 – December 2017 (consulting)

Software Developer
   Practice Loan Company, Lichfield, September 2016 – September 2017

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