

JOHN JACOB (JAKE) HEARN

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OBJECTIVE

Having recently completed a Computer Science MSc, including a Cyber Security based placement year, I am looking for a permanent computing position. I would like to get exposure to different aspects of computing work including more software development. I wish to expand upon my IT workplace experiences, collaborating with others and inputting as appropriate and helpful to the execution of a range of projects. This will help me to grow my IT career as well as inform future career choices. I am hard working, sensible, and enjoy being part of a team.

My decision to take up Computer Studies was a direct result of COVID, the effect it had on the Heritage Sector and on associated work opportunities (the focus of my BSc). I am very pleased I made the switch.



RECENT WORK EXPERIENCE

Placement with AWEN Collective | AWEN Collective | June 2022 – June 2023

Placement at AWEN Collective, a cybersecurity company specialising in providing full asset discovery, analysis and management, with a focus on OT(Operational Technology). My responsibilities included:

Creation of Automated Tests: My primary role was the creation of thorough, scalable, and reliable tests for AWEN's product Dot, ensuring all code deployed was bug free.

Incorporating the Tests into Dot's code deployment in AWS: Working with a senior developer, I helped to ensure the tests created were run during the deployment of Dot's code, streaming the testing process, ensuring releases were error free.

Writing a White paper on OT Cyber Security in Food and Beverage Manufacturing: I researched and produced a white paper on a sector important to AWEN. This was published on AWEN's website, linked to in newsletters and distributed in printed form at conferences.

Writing blog posts on OT related subjects: I also was tasked with researching and writing blog posts for AWEN, published on their website. These blogs were relevant to various OT cyber security related topics, and helped raise AWEN's web presence on a range of topics.

Conducted target market research: I identified prospective clients for the sales team, providing a brief on each prospect.



PREVIOUS WORK EXPERIENCE

Barista with operational responsibilities | Short and Tall Coffee | 2020 – 2021

Construction Project Management Support | ECCONE Project LTD | 2021

Barista | Maggie and Rose | 2015 – 2017

Various voluntary roles | 2016 – 2020



TECHNICAL SKILLS

General Tools: VirtualBox, Git, AWS suite, VSCode, Eclipse, Auto-CAD, Unity, Microsoft Office Suite.

Languages: JavaScript, Python, Django, Java, HTML, CSS, C#.

Visualisation Tools: D3

Quality Assurance Tools: Cypress

Networking Tools: Wireshark, Scapy.

DataBase tools: MySQL.

Hardware skills: I have replaced failing hardware within my computers (RAM, graphics cards, laptop screens) and worked through a variety of hardware/software issues for family and personal devices.



INTERESTS

I am a keen cyclist who enjoys cooking, comedy, woodworking and gaming, setting up personal servers for myself and friends to play together.



EDUCATION

Computer Science MSc | Cardiff University | 2021 – 2023

Modules undertaken: Computational Thinking; Fundamentals of Programming; Algorithms, Data Structures and Programming; Software Engineering; Data Visualisation: How to use good visualisation principles to establish the best ways data can be represented. **Overall grade: Merit**

Link to [content detail of modules](#)

Computing Dissertation: Creation of network traffic visualisations with applicable display features, aimed at a broad target audience. Creating a python PCAP file reader, to acquire the required data which was then fed into a visualisation produced using D3. **Grade: Merit**

Historic Building Conservation BSc | Kingston University | 2016 – 2019

Foundation Degree, converted to **Bachelors' Degree** in **Historic Building Conservation**

Grades: Foundation Degree – **Merit**; BSc – **2:2**; Bench Joinery (additional study) - **level 3 diploma**



PROJECTS (ACADEMIC AND PERSONAL)

Website development: Including websites developed using HTML and CSS for several university modules. Furthered my skills by using Flask and SQL to create dynamic websites, allowing users to register accounts, create blog posts, leave comments and ratings for specific posts.

Programming challenges: Completed a series of challenges in both Python and JavaScript, without importing library modules. Initially undertaken to improve my programming skills, this is continued through attempting challenges during Advent of Code.

Automated assessment tool: Working as part of a team deploying an AGILE/SCRUM methodology and using flask and D3 we designed and created a tool to produce exercises for students, providing them with feedback and giving teaching staff a summary of the challenges and successes of the students.

Network Traffic visualisation: See 'Computing Dissertation' above.

'Capture The Flag' events: Taken part in multiple 'CTF' events run by external security organisations, working in teams to complete challenges, building skills in web exploration, forensics, cryptography, reverse engineering and binary exploitation.

2022 Game Jam: Working with university friends, we created a simple two player, platformer game learning Pygame, testing our Python skills in a new way as a collaborative team.

Video Game development: To further my knowledge of game development, I self directed learning of C# and Unity, furthering practical knowledge in areas of game physics, scripting, and UI development.

Various small Quality of Life projects: Using mainly Python, I have created several small scripts for calculations such as converting imperial units into metric for cooking (fahrenheit into celsius, cups/lbs/ounces to grams), for woodwork (feet/inches to metres/centimetres/millimetres), a script for downloading Youtube videos, and for various calculations needed in specific video games.

BSc projects: Undertaken multiple project management role positions involving the assessment of, recommendations and planning for appropriate works to historic listed buildings.

Woodworking projects: Set up my own workshop, creating designs to undertake professional and personal projects for friends and family.