# JOHN JACOB (JAKE) HEARN





### **O**BIFCTIVE

Having completed a Computer Science MSc, including a Cyber Security based placement year, I am looking for a permanent computing position. I have excellent QA technical experience and a good understanding of cyber security threats. I would like to get exposure to different aspects of computing work including more software development, expanding 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 careers (the focus of my BSc). I am very pleased I made the switch, the work is engaging and absorbing.



# 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:

**QA Lead:** I was tasked to find the testing framework most suitable to our requirements, which could provide 100% test coverage and be implemented into the product's deployment.

**Creation of Automated Tests:** My primary role was the creation and management of thorough, scalable, and reliable e2e 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 Cyber Security related subjects:** I was tasked with researching and writing blog posts for AWEN. 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.



# TECHNICAL SKILLS

**Languages**: JavaScript, Python, HTML, CSS. lesser: C# , Java.

**Web Development Technologies:** D3, Node.js, Flask, Jinja

**Quality Assurance Tools**: Cypress

**Networking Tools**: WireShark, Scapy.

DataBase tools: MySQL.

**Version Control:** Git

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



#### INTERESTS

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



# 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



## **Computer Science MSc |** Cardiff University | 2021 – 2023

**Taught Modules:** 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. **Grade: Distinction** 

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 (CAN BE FOUND ON MY WEBSITE OR GITHUB)

**Website development:** The majority of my web projects can be found on my website, they are focused on creating interesting, unique projects which encourage user engagement.

**Site and web application deployment**: Following my involvement deploying AWEN's product to AWS, I have deployed my own personal website and web application.

**Programming challenges:** Frequently participating in code challenges to improve my programming skills, this is continued through attempting challenges on Codewars and participating 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.

'Capture The Flag' events: Taking 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.