

## Qualifications

BSc (Hons) Computer & Digital Forensics, Teesside University 1<sup>st</sup> Class Honours.

Open University, Introduction to Cyber Security.

## Profile

I've recently graduated from Teesside University with a First-Class Honours in BSc Computer & Digital Forensics. I see myself as a confident and hardworking individual who is passionate about the IT industry and highly motivated to learn. I have a very broad skillset and have experiences using skills ranging from programming to project management.

I aim to pursue further opportunities within the industry to increase my knowledge to identify where my strengths lie and therefore specialise my skills and achieve a career in Cyber Security or Penetration Testing.

## Technical Skills

TECHNOLOGY DOMAIN	TECHNOLOGIES AND TOOLS
Programming Languages	Java, Maven, JUnit, Cucumber, HTML, CSS (including bootstrap), JavaScript, ReactJS, MuleSoft, VBScript, Bash
IDE's	IntelliJ, PyCharm, AnyPoint Studio/Eclipse, Visual Studio Code
Operating Systems	Windows, Linux (Ubuntu, Kali, MacOS)
DevOps Technologies	Git, Jenkins
Database Technologies	MySQL, Oracle SQL, MongoDB
Project Frameworks	Agile Scrum, Waterfall
Other	Postman, Selenium

## Experience

GitHub: <https://github.com/DanHiggins23>

QA Consulting – Consultant

QA Cinemas

To put these skills into practise we were set a group task in which we were to produce a website mockup and a plan for based on client requirements. Within this we had to set out user stories and sprints to form the plan. My individual role in this task was to produce the mockup of the websites, based on priorities that we created from the requirements. At the end of this week, we presented our findings as a group where I introduced the topic, discussed what the presentation was covering and gave a conclusion on all the things which were covered.

### ***Normalised Database***

This week was focused on SQL and NoSQL technologies, in particular MongoDB. The task for this week was to produce a normalised database, in which queries could be carried out on. For this project I used MySQL workbench to produce ERD's and utilised the command line to interact with the database. We were given a workbook in which we were to perform particular queries including inserting, deleting, updating and joining tables. The same process was also carried out for MongoDB, however using solely the command line to interact.

### ***Text-based Adventure Game***

The assessment for Java was to produce a text-based adventure game, in which a user can make choices in order to meet a final goal. For this, I created a Spiderman style game, where the game was split into 4 section to intimidate a map. Within this project, I used libraries such as Scanners to get user input and Random number generators to produce a random number for damage, as well as creating a random number within a range to match it to a boss type to make the game more replayable. I used OOP principles such as encapsulation throughout the project to split the classes up to fit the needs.

### ***Bank GUI Application***

For Java 8, we were tasked at producing a GUI application that utilised an SQL connection. I used the Java standard GUI library (but also tried to get a familiarity of IntelliJ GUI builder in my own time) to produce the backbone of the application, and added action listeners for each button to carry out the desired action, which utilised Inheritance. The features I added into this application were a simple login system (using simple conditionals to authenticate a user) and allowing a user to withdraw, deposit and check their balance. Although the GUI was very basic looking, I ensured that the UI remained consistent throughout.

For the SQL connection, I once again made use of MySQL workbench to setup a connection on the local host and to maintain the database itself. This was connected to the application by importing the Java SQL library and using a try-catch to output any exception caught.

### ***JavaScript Calculator***

For this project, we were tasked at producing a GUI calculator using HTML & CSS, providing the functionality with JavaScript. Based on my previous experience of HTML

& CSS, I was able to produce a very aesthetically pleasing calculator, aimed at a old-style calculator with the choices of colour scheme as well as the imported fonts to create the look I was going for. The eval() function within Javascript was utilised to produce the core functionality of the function, as was called onClick of the equals button. I also added some hidden functionality within project, so that if a certain entry was made, an audio file would be played.

### *Jenkins Automated Testing Project*

For this project, I installed and setup Jenkins to allow the automated tests to be directed at. Cucumber was used mainly for this project with a feature file provided which was used in the runner to provide the specific @Given, @When, @Then tests. Selenium was also used within this project to utilise the chrome web driver, which enabled me to get specific elements and interact with them as desired. During this project, I ensured all tests passed successfully and also produced reports using the Extent Reports library within Java.

### *MuleSoft Flows*

We then began to create flows and place listeners and certain objects within flows to carry out certain tasks. Multiple mini-projects were produced using MuleSoft, such as a simple calculator which made use of a HTML form, which passes values by the post method to the MuleSoft API. I made use of choices to set Payloads depending on a button click.

### *React Calculator*

I learnt what a component was and how to use one, as well as learning about states of components. I put this learning into practise by producing multiple mini-projects utilising states, as well as carrying out an assessment to create a GUI calculator where I changed the state of the display screen (a textarea) of the calculator to show the entered values.

## Final Year Project – Possible penetrable vulnerabilities within Hawk-Eye

During my final year project, I explored and attempted to discover any possible vulnerabilities within Hawk-Eye systems, with a focus on the systems used within Football (i.e. Goal Line Technology & Video Assistant Referee), which could be explored by a malicious party. Due to constraints, a theoretical approach was taken with the research to identify the most common vulnerabilities and attempt to apply them to the given technology.

## Ford Motor Company – Project Manager

During this 3-month summer placement as Project Manager at Ford, I was involved in multiple different projects, responsible for holding meetings with world-wide clients, working with large amounts of capital. I personally solely managed a pilot project for

the company and brought a project from Red status to Green in my time at Ford. During this time, I got very accustomed to using software such as WebEx and developing my ability to make relationships over the phone.

## Civil Service – Cyber Security Placement

I gathered great knowledge during this 6-week summer placement, both practical and theoretical, including Network Management, TCP/IP, OSI model and cyber security etc. I learnt Python during my time here, and got familiar with IDE's such as PyCharm. I also was given a Rubber Ducky, and began to learn the simple language to perform different actions.

## Additional Information

- Full clean driving license
- Current UK Passport
- Private Equity Internship at Graphite Capital

## Hobbies/Interests

My interests revolve around everything within technology and computing. I've personally built 4 high-end PC's, a media server and taught myself multiple programming languages. When it comes to non-technical hobbies, I love watching/playing football, playing twice a week at university, and holding captainship of my five-a-side team. I also enjoy going out to eat with family and friends, trying new places.