

# Solly Varcoe

Email: [sollyvarcoe@gmail.com](mailto:sollyvarcoe@gmail.com), Mobile: 07908911995

Github: [www.github.com/sollyvarcoe](http://www.github.com/sollyvarcoe)

## Education

---

### University of Bristol

September 2017 - June 2021

M.Eng. Mathematics and Computer Science (Integrated Masters)

Predicted 1st

**Results:** Third Year: (79%), Second Year: (74%), First Year: (71%)

Notable Projects:

- 'Leaky Integrate & Fire' neuron modelled in python for Computational Neuroscience module (80%)
- Object classifier utilising Adaboost learning algorithm alongside shape and edge detection using C++ & OpenCV (79%)
- Graphics rendering API in C++ with rasterising and raytracing capabilities alongside morphological anti-aliasing (75%)

Notable Modules: Complexity & Number Theory (93%), Cryptography A (84%), Theory of Computation (84%), Methods of Complex Functions (81%), Machine Learning (81%), Data Structures & Algorithms (81%), Information Theory (80%)

### Exeter College

2015 - 2017

**A Levels:** Physics (A\*), Mathematics (A\*), Further Mathematics (A) **AS Levels:** Philosophy (B)

### Chulmleigh Community College

2010 - 2015

**GCSES:** 11 (A\* - C) including Mathematics (A\*), Science (A), Computer Science (A), English (Language/Literature) (A)

## Employment

---

### Ministry of Defense

#### Virtual Software Intern

July 2020 - September 2020

- Researched and implemented a quantum-resilient, lattice based cryptosystem (NTRU) in C.
- Produced security reports on potential malware by reverse engineering executables using x86 assembly and IDA Pro.
- Presented to industrial clients such as AWS and IBM on topics such as machine learning and cyber security.

### CGI (Formerly SCISYS)

#### Software Engineer Intern

July 2019 - September 2019

- Worked as a full stack developer on a classified AI and automation framework for the Royal Navy and DSTL.
- Expanded analytic capabilities by designing, implementing and testing a history module, including data visualisation.
- Increased stability of the front-end interface by 20% by rewriting all automation tests using a class based model and Selenium. This enabled rapid prototyping of front-end components, as testing logic was separated from page structure.
- Embraced Agile development tools such as Git, Sourcetree and Jira to work efficiently within a team of 6 developers. This included presenting my work at daily standups and contributing future ideas at weekly sprint reviews.

## Additional Projects

---

### Overworld (Open Source Contributions)

Ongoing

- Social network using ReactJS and Python/DjangoDB, enabling users to share their favourite video game moments.
- Worked with a team of 18 other developers to add new features (such as ratings) and improve technical documentation.

### University Game Jam

2019

- Collaborated with 4 other students to create a espionage game within a 24-hour period using C# and Unity.
- Prototyped & iterated quickly on gameplay ideas, including enemy pathfinding and a lighting-based stealth system.

## Technical Skills

---

**Languages:** C, C++, Java, Javascript, Python, Haskell

**Misc:** Git, Jira, JUnit, Selenium, React, SQL, x86