Sophie Thompson

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Education

2018 - 2022	**Imperial College London**	MEng Computing

- Year 3: First-class honours with 82.2% in Robotics
- Year 2: First-class honours with 84% in lab projects and 82% in Software Engineering Design
- Year 1: Upper Second class honours with 88% in Mathematical Methods

2011 - 2018	**Westcliff High School for Girls**	Sixth Form

- A Level: A*A*A*A* in Maths, Further Maths, Chemistry, and Physics

Work Experience

2021	**Facebook**	Software Engineer Intern

During a 5 month placement I worked in the Release Engineering team on an individual project. In **Python**, using **Click**, I worked on a command line tool that aided engineers debugging. The purpose of this tool was to not be reliant upon internal infrastructure so during outages the tool would still be available to the engineers.

2020	**American Express**	Software Engineer Summer Intern

In a team of 7 we worked on a microservice in MARS (Modern Accounts Receivable Service), implemented in **Java** using **Spring**. The microservice was testing using **Chaos Engineering**, we killed pods and tested that the services continued to work as usual. During my time at AmEx we completed 2 sprints, for one of them I acted as Product Owner within our team. Being Product Owner meant taking on a leader role and monitoring the team's progress and effectiveness.

Projects

2021	**GolfCoach**	Swift

In a group of 6 we developed a mobile app for iPhones that would record the user's golf swing and give feedback based on the analysis. We used **Optical Flow** to track the movement of the golf club and Apple's **ARKit** to get a 3D skeleton model. The video would playback pausing at key stages of the swing using the skeleton to recognise those positions and give feedback on the speed of motion and the angle of the joints.

2020	**Unicompare**	Python

In a group of 4 we developed a webapp for prospective university students to compare universities in both social and academic aspects. The webapp was mainly **Python** using **Django** and some **HTML**, **CSS** and **Javascript**. In the webapp the user gets directed to a quiz based off of this the user is given a shortlist of 5 universities. The webapp was developed through numerous design iterations with multiple stakeholders. In this project we used **PostgreSQL** for the database and **Heroku** for deployment.

2020	**WACC Compiler**	Java, ARM

A compiler for the simplified language WACC. This compiler was written in **Java** and is capable of translating WACC into **ARM** assembly code that can then run, giving the desired output of the program. We expanded the basic compiler to include overloading variables and functions (based on parameters and/or return types). Optimisations include constant evaluation and control flow.

2019	**Pintos**	C

During this project we built on **legacy code** to build an OS that implements a scheduler, system calls and virtual memory.

Skills & Interests

Programming	Comfortable with Python, Java and C. Some experience with Haskell, C# and Swift. Comfortable with tools such as version control and CI/CD.
Web Based	Comfortable with HTML, CSS and some experience in JavaScript.
Ten-Pin Bowling	Have competed internationally both independently and as part of Team England. In 2018 became double European Champion collecting 2 golds and a silver in the European Youth Championships in Denmark. Acted as team captain in multiple teams during my bowling career.