

# ALEX LIU

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## EDUCATION

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### Imperial College London (MEng Computing)

2018 - 2022

- Second year: 77.0% (1st class)
- First year: 71.1% (1st class)
- Achieved 100% in a 5-week C group project.

### Haberdashers' Aske's Boys' School

2013 - 2018

- A Level: Further Maths A\*, Maths A\*, Physics A\* and Economics A
- 9 A\*s and 1 A at GCSE

## PROJECTS

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### Web App

Event management platform for event organizers to create, advertise, release and allocate tickets and track payments. To be used by at least 2 Imperial societies in the coming year with a collective user base of 200+. Made using React JavaScript, Node.js, Google App Scripts, MongoDB.

### Imperial Virtual Campus

Developed a virtual Imperial campus in Minecraft for Freshers in the coming year to socialise when studying remotely. Used Java, MongoDB, Angular to create mods allowing lecturers to upload lecture links and schedules such that users in the virtual campus can go to the lecture hall and access the lecture's link.

### Mobile App IOS & Android

Encouraging friends to exercise during quarantine by creating, filming and sending fitness challenges with video. Made using React Native, Python, Flask, PostgreSQL, AWS S3.

### Pintos

Extended a minimal operating system by implementing multi-threading, user programs and virtual memory. Supports kernel threads, loading and running user programs and a file system. Written in C.

## EXPERIENCE

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### Facebook Virtual Hack

August 2020

Participated in the hack solving challenging coding challenges and product designing.

### Smarmarkets

Summer 2020

Accepted a 12 week internship at Smarmarkets but unfortunately it was cancelled due to Covid.

### Firetech

Summer 2019

Awarded 'Most influential first year tutor'. Taught STEM classes to groups of 8 - 16 teens each week. Mainly teaching basic and advanced Python programming.

### Imperial College Hackathon

February 2019

Utilised the Godot game engine and sprite sheets to create a 2D top-down fighting game with 4 other team members. Appreciated the need for persistence when learning a new language under time constraints.

### Imagination Technologies

Summer 2017 & 2018

Developed a visualisation tool to display the critical path along a series of hardware components causing the greatest error. Able to recursively draw the graph of connected components, written in Python.

Developed a program to optimally approximate the function  $f(x) = 1/x$  on the interval  $1 \leq x \leq 2$  using F16s whilst being accurate using rounding modes. The estimated program size on hardware had 60% of the area of a flat look up table.

## SKILLS & INTERESTS

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**Languages/Technologies:** C, Haskell, HTML, Java, JavaScript, Python, SQL, Node.js, Angular, React/React Native, MongoDB, AWS, PostgreSQL.

**Publicity Officer '19/20** of Imperial College ABACUS with nearly 300 members. Duties involve managing events, designing and producing: tickets, posters, and graphics mainly using Photo-shop and Gimp.

**Duke of Edinburgh** Achieved Gold and Bronze award.