

EDUCATION

Computer Science BEng Hons (First Class)
University of Edinburgh 2020

3 A-levels (*A**, *A*, *B*), 14 GCSEs (*5 A**)

EMPLOYMENT

Aspect FS Freelance Software Designer 2020
(*React*, *Firebase*, *Jest*)

- Completed phase one of a platform to optimise face-to-face fundraising operations.
- Cut running costs by 60% compared to the previous system by integrating more cost-effective API services, while retaining and even extending functionality.
- To be used by 20+ fundraisers to capture direct debit information and process one-off contactless donations, as well as multiple UK charities to retrieve and process donations.

Viola da Gamba Society Freelance Web Designer 2016
(*Javascript*, *PHP*) vdgs.org.uk

- Overhauled the front-end of a 15 year old website with mobile support and a modern design.
- Actively used by over 500 members.
- Created a framework for the admins to easily update the contents of the page.

PROJECTS

Noxive (*Vue*, *Firebase*) • My electronic music production hobby ongoing since 2014 with over 750,000 views across all platforms. The official website has a built-in music player to showcase my discography. noxive.com

Dissertation (*Python*, *PyTorch*) • Optimisations in deep learning methods for Jazz chord generation. Created a very capable model and a grade of 80%.

Genetica (*Unity*, *C#*) • A mobile game about genetic modification and galactic domination. The game features full 3D graphics with complex animal behaviours to create a self-balancing ecosystem.

House Music Generator (*C#*) • A windows app capable of generating a section of music complete with drums, melodies, and chords.

Ultrasound Transceiver (*Java*) • A Java app capable of sending and receiving small amounts of data between everyday mobile devices over ultrasound. Created during a 24h CreatED hack.

LANGUAGES

Trilingual:

English • Native (*First language*)

German • Native (*GCSE A**)

Cantonese • Rusty (*GCSE A**)

School of Engineering IT Team Intern 2019
(*Vue*, *REST API*, *Mocha*, *Chai*)

- Built the front-end of a system to replace the previous outdated database management tool used by HR admins at Edinburgh's school of engineering.
- Reduced response times for some operations by up to 90% using REST API calls to the Python back-end.
- Extended existing functionality, resulting in fewer steps for any given function and increasing usability.
- Worked closely with in-house library creators to report and resolve bugs.

Oxford University IT Services Intern 2015
(*NetLogo*)

- Created a wave propagation simulation using a novel programming language
- Achieved a gold CREST award.
- Produced insights into the usage of the language, contributing to the active research thereof.

Chess Robot Group Project (*Python*, *PyTorch*, *Raspberry Pi*) • Lead a software team of 5 to develop a robot capable of playing chess on a physical chess board, using only a camera as input. Our team won second place in an Össur competition out of 22 groups.

Owme (*Javascript*, *PHP*) • A web app to help track the debts within groups of friends with PayPal integration, used extensively by my flatmates and me throughout university.

Superchess (*React*, *Websockets*, *Heroku*) • A multiplayer web game based on chess but with more pieces and a configurable setup. Features a challenging AI with multiple levels of difficulty. superchess.felixwu.me

Encryption-secure Chat (*React*, *Websockets*, *Heroku*) • A real-time, AES-encrypted web messaging app with self-deleting messages. chat.felixwu.me

Alarm Timer (*Android*, *Java*) • A more intuitive interface for setting alarms and timers on Android.