



## PAID WORK & EXPERIENCE



### CONTACT

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### EDUCATION

Computer Science  
Bachelor's at **The**  
**University of Edinburgh,**  
4th year (final).  
On track for a **1st**

A-levels at Oxford Spires  
Academy:  
Mathematics: **A\***  
Computing: **A**  
Further Maths: **B**



### LINKS

LinkedIn:  
[linkedin.com/in/felixxwu](https://www.linkedin.com/in/felixxwu)  
GitHub:  
[github.com/felixxwu](https://github.com/felixxwu)  
Website:  
[felixwu.me](https://felixwu.me)

**School of Engineering Internship (2019)** A 3-month long internship for the School of Engineering at Edinburgh, in which I worked with the IT Team to build the foundations of a new user interface for database management related internal applications. The component that I was in charge of is be capable of making complex queries, displaying results in a modular and configurable way, and editing field values and relationships robustly and intuitively, amongst other things. The component will be used in a wide variety of applications including a staff and student account and relationship management system, a desk allocation system, and a software license tracking system. See my GitHub for links.

*[Vue, JSON:API, Mocha, Chai]*

**Chess Robot Group Project (2019)** As the leader of the software team of 5, I was in charge of holding weekly meetings, discussing ideas, constructing a plan of attack, and distributing tasks and deadlines. Our robot was capable of scanning the state of any chess board, querying a chess AI for a move to play, then send instructions to a robotic arm to execute the move. We trained a machine learning classifier running on a server to recognise the positions of the pieces on the board, and used a RESTful API to talk to the Raspberry Pi to execute arm movement. My main task was to write code to interface with the robotic arm. Our robot won second place out of 22 groups.

*[Python, RESTful]*

**TrapIt Website Design (Freelance, 2018)** Successfully developed and delivered a blog-like page for the owner of the electronic music YouTube promotion channel "TrapIt", with editor-exclusive interface for the creation and alteration of posts. After weeks of stakeholder meetings, requirements specification and use-case documents, I successfully delivered this work to the satisfied owner. *[React]*

**Viola da Gamba Society Website Redesign (Freelance, 2016)** VdGS is a charity dedicated to the revival of, and research into the Viola da Gamba. I successfully developed and delivered a redesign of the visuals, an updated front-end for improved mobile support, and a framework for the web administrator to maintain the contents of the page in the future. The site has since been actively maintained with no complaints and used by the hundreds of VdGS members frequently. [vdgs.org.uk](https://vdgs.org.uk) *[JavaScript, PHP]*

**SpaceX Hyperloop Student Competition (2016 / 17)** Helped create the website for HYPED, a student society at the University of Edinburgh dedicated to accelerating the development of Hyperloop and implementing the technology in the UK. [hyp-ed.com](https://hyp-ed.com)

**Parents' Evening Modelling and Proposal (2016)** Created a model of queue times for my school's parents' evenings using some existing available data. The model showed how sensitive the queuing time is to inefficiencies in between meetings, and after giving a presentation to the head of school, they took measures to combat this in subsequent years, and indeed reduced queue times significantly.

**Room Acoustics Simulation (Placement, 2015)** 4-week long STEM placement for The University of Oxford IT Services to use a novel agent-based programming language "NetLogo" to complete a concept simulation for standing waves in a variable 2D environment. *[NetLogo]*



## TECHNICAL SKILLS & LANGUAGES

Most competent in:

Javascript (+ Vue, React, Node)

Java

Python

HTML / CSS

SQL

Android (Java/Kotlin)

PHP

Object Oriented Programming

Software Testing

Limited experience:

Machine Learning

Matlab

Haskell

C

C#

MIPS Assembly

English: fluent

German: fluent

Cantonese: novice



## MY PROJECTS & APPS

**Noxive** Noxive is my alias for my electronic music production hobby. So far I have gained over 500k views across YouTube, SoundCloud and Spotify, and over \$400 from royalties. I have had the opportunity to collaborate with many talented artists over the years, improving my communication and feedback skills. [noxive.com](https://noxive.com)

**Noxive.com** A landing page for Noxive, featuring links to my social media, discography and a built-in music player. I advertise this site anywhere I can because it has proven to serve well as an entry point for anyone looking for a particular Noxive social media account or release. [noxive.com](https://noxive.com)  
[Vue, Cloud Firestore]

**Second Wind** A multiplayer real time strategy game in which you control a floating island in search for resources on the map. Resources are finite and so you must compete against other players by engaging in a chess-style turn based battle. The resources you win can be used to upgrade your island and create units for the army you use in battles. Each unit has unique abilities and so choosing the right ones to develop play styles and strategies is crucial to winning a battle. See my GitHub for links. [JavaScript, PHP]

**Naughts and Crosses** A naughts and crosses web game that you can play between two devices in real-time using ReactJS, NodeJS and Websockets. It uses the device's location to find games nearest to you. [felixwu-xo.herokuapp.com](https://felixwu-xo.herokuapp.com)  
[React, Node, Websockets]

**Owme** An online financing tool with PayPal integration to help groups of friends keep track of their debts with each other for things like groceries and bills. It features a Google sign-in option and automatic settling of circular debts. [noxive.com/owme](https://noxive.com/owme). [JavaScript, PHP]

**Music Generator** A Windows app that can randomly generate House music, complete with drums, main melody and a chord sequence. By using music theory, the chord sequence that is generated is guaranteed to sound musical, and is taken into account when the melody is created so that there are no harmonic clashes. [C#]

**Ultrasound Communication** A proof of concept Java app to transceive data via audio in the ultrasonic range, created with a partner for the Edinburgh CreatED 24h hackathon. We think that it has similar advantages to QR codes and if done well could be a novel alternative. [Java]

**Encryption-secure Chat** A real-time encrypted web messaging app using AES and Websockets with self-deleting messages. [chat-secure.herokuapp.com](https://chat-secure.herokuapp.com)  
[React, Node, Websockets]

**More** A more comprehensive list of projects, as well as additional info such as university courses can be found on [felixwu.me](https://felixwu.me).