ALFRED RENN

SOFTWARE ENGINEER

🌐 View online! https://cv.alfierenn.dev

👤 ABOUT

Hi! I'm Alfred: physics graduate, toki pona speaker, and software engineer. I love to make beautiful things with code (mainly using HTML/CSS/JavaScript and Python), including websites, apps, and graphs. With all my work I create good quality, robust, and well-tested code, as well as powerful automation and well-organised git repositories, empowering collaboration. Do check out my website and GitHub!

💼 WORK EXPERIENCE

Freelance Software Engineer
🌐 https://github.com/alifeee
March 2023 - Present

Highlights

▷ Co-maintaining **gspread**, an open-source **Python** API for Google Sheets with over 8 million downloads per month, demanding a high level of future-planning and project management.

▷ Developed new code and tests in **JavaScript** for a new expansion for keyteki, an online card game, working in a fast-paced and highly collaborative environment ahead of the new expansion's release.

▷ Developed a mod for the video game Factorio in **Lua**, involving a low-level partner-plugin for the voice chat client Mumble, written in **C**. Released on Windows and Linux.

▷ Interfaced with an electronic dot-matrix display discarded from a bus station, using **C**, requiring an involved knowledge of electronics and low-level communication protocols.

ByteSnap Design
🌐 https://www.bytesnap.com/
August 2022 - March 2023

Software Engineer

Highlights

▷ Utilised **Vue** and **TypeScript** to create an intuitive, user-friendly web application, using robust design patterns and best practices to ensure optimal functionality and user experience.

▷ Designed and developed a responsive, feature-rich web application using **Flutter** and **Dart**, incorporating a range of views and user-friendly interfaces for maximum ease of use.

▷ Employed **WPF** and **C#** to create a high-performance application, using **SQL** and an MVC architecture to facilitate the viewing, manipulation, and analysis of data.

◎ CONTACT

📍 **Sheffield, UK**

✉ **alfredirenn@gmail.com**

🌐 **https://alifeee.co.uk**

📶 **Blog**
https://blog.alifeee.co.uk

in **LinkedIn**
alfredrenn

○ **GitHub**
alifeee

🏛 EDUCATION

2018 2022	**Durham University**

🌐 https://www.durham.ac.uk/

🎓 MPhys Physics

Grade: 1st (77%)

Courses

▷ Masters Project: Using Machine Learning to Optimise Quantum Optics Experiments

2011 2018	**Cottingham High School and Sixth Form College**

🌐 https://www.cottinghamhigh.net/

🎓 A Level, GCSE

Grade: A* A* A* (A Level), 6A*, 4A, 2D* (GCSE)

Courses

▷ A* Physics

▷ A* Mathematics

▷ A* Further Mathematics

▷ (GCSE) A* Mathematics, A English

▷ (GCSE) + 5A*, 3A, 2 Dist*

> Streamlined the deployment process of complex code with multiple dependencies, using **Docker** and **GitLab** CI to optimise the development process and improve productivity.

Durham University Physics Department
🌐 https://www.dur.ac.uk/qlm/
June 2021 - August 2021

Solar Physics Research Student
Researching novel telescope imaging techniques using quantum gases

Highlights

> Developed robust code with **Python** for fabricating and analysing images from a solar telescope.

> Performed deep literature review to justify techniques used in the creation of said telescope.

> Discussed and acted upon desires and needs of telescope engineers, theorists, and observationalists.

Viper RF
🌐 https://www.viper-rf.com/
August 2019 - September 2019

Design Engineer Intern
Programmed and debugged a real-time optimisation algorithm on a microcontroller with **C**. This was used to minimise power losses for a microwave generator, to be used in an ion thruster for space satellites, improving both industry knowledge and personal skills.

✸ AWARDS

July 2019

Durham University
🏆 Florence Nightingale Award for Graphical Excellence

Awarded for the optimal presentation of quantitative data to illustrate a Helmholtz coil. Used Python for graphing.

👥 VOLUNTEER

gspread - Simple interface for working with Google Sheets
🌐 https://github.com/burnash/gspread/
June 2023 - Present

Open-source Maintainer
Maintaining an open-source Python library for interacting with Google Sheets, including adding new features, fixing bugs, and responding to user issues.

British Heart Foundation
🌐 https://www.bhf.org.uk/
March 2023 - Present

Electrical Tester
Testing electrical equipment for sale in charity shops.

≔ SKILLS

Data Analysis

`Python` `Statistics` `Jupyter`

Web Development

`HTML` `CSS` `JavaScript` `Vue`

Git/Project Management

`Pull requests` `Git issues`
`Open source maintainer` `GitHub Actions`

Great development practises

`Test-Driven Development` `API Design`
`Reliable documentation`

DevOps

`Docker` `Git` `Continuous Integration`
`Continuous Deployment`

♥ INTERESTS

Electronics

`PC building`
`Arduino (microcontroller and circuit boards)`

Open-source

`Contributing to open-source projects`

☑ REFERENCES

> [... W]e were very impressed with [Alfred]'s outstanding contribution to our business in a relatively short period. He demonstrated extremely high intelligence, organisation, good technical communication skills, work ethic, and a positive attitude. [Available on request.]
> — Jim Mayock, Viper RF. Matthew O'Keefe, PhD, MBA, Viper RF.

> "This is very neat thank you for this contribution."
> — Alexandre Lavigne, open-source pull request.

> "Thanks @strib and. @alifeee - very good team work!!!!"
> — Romano Silva, open-source pull request.

> [Available on request.]
> — Prof. Ifan Hughes, Durham University

> [Available on request.]
> — Graeme Wintle, ByteSnap Design