Chloe Bethel

CV

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Education

2018-2022 **Bachelor of Science in Theoretical Physics**, *University of York*.
2:1

2016-2018 **A-Levels**.
Physics (B), Computer Science (A), Maths (B), Further Maths (C)

2012-2016 **GCSEs**.
3A*, 3A, 1B, 3C

Experience

Jun 2023 - May 2025 **Graduate Software Developer**, *ETAS Limited, York*.
Responsible for development and maintenance of the Python based testing framework for the RTA-CAR product and troubleshooting issues with embedded software. Managed CI/CD pipelines including Jenkins for testing, Packer and Terraform for AWS machine images. Collaborated using Git (Bitbucket) and Jira/Confluence in an agile team.

2021 **Internship - CASTEP on Novel Architectures**, *University of York - Physics*.
Porting the CASTEP quantum mechanics simulator to run more efficiently on the Bede supercomputer - Power architecture port + GPU acceleration via OpenACC.

2019-2022 **Infrastructure Officer**, *HackSoc (university Computer Science society)*.
Responsible for maintaining the HackSoc servers - both physical (3 on campus) and virtual (2 provided by Bytemark). Responsible for deploying and maintaining software, including custom software written by other members.

Skills

Strong knowledge of C, C++, Rust, Python and Fortran. Some experience with C#. Flexible and willing to adapt to other languages.

Extensive experience with Linux with system administration experience - both in HackSoc as their Infrastructure officer, and running my own personal infrastructure.
Experience with configuration management with Ansible and Nix as well as Proxmox and libvirt for virtualization.

Projects

Further descriptions/documentation available at https://stary.zone/projects/

[link] Open source contributions - Meshtastic (C++ with Arduino)
Improved support for the STM32WL platform, including flash space optimization (initially 99% with all features disabled, now at 95% with all features).

[link] Francium - Hobby operating system using Rust
supports multiple architectures - x86_64 (PC) and AArch64 (QEMU virt target, Raspberry Pi 3/4)

[link] USB controlled HDMI switch
custom hardware and software, high speed PCB design

[link] ESP32 temperature sensor
custom hardware and software, integrates with Grafana (via InfluxDB) and Home Assistant

[link] LED controller software port to Raspberry Pi Pico
embedded C development, CMake and Makefile integration

Interests

Electronics - Custom PCB design, microcontrollers and FPGAs.

Amateur radio - Foundation license

Member of Makespace (https://web.makespace.org/) - a community workshop in Cambridge.

References

References on request (redacted copy)