

Experience

- 2024/03 **Volunteer Data Assistant** Bath Royal Literary and Science Institution
Present
- Actively investigated existing methods of data collection to identify potential inconsistencies
 - Collaborated with team to implement corrective measures, ensuring data integrity and reliability
 - Scanned, cleaned and processed 600+ lines of data using core utilities such as awk and sed
 - Proposed a new schema for sales data collection, preparing for future analysis of customer data
- 2019/09 **Temporary Student Ambassador** University of Bath
2019/10
- Assisted the University of Bath with their outreach attempts to potential Computer Science students
 - Underwent ambassador training to develop public speaking and crowd management skills
 - Managed student orientation and their transition from secondary to higher education

Programming

Languages: Rust, Python, Bash, HTML/CSS, JavaScript




Tools/Libraries: **Rust** axum, itertools, clap, crossterm

Python NumPy, Pandas

Frontend HTMX, Vue.js, Sass, Tailwind

Other AWS, Git, Linux

Projects

- (2024) **AI Translation Web Application**  /googoltranslate.com
 /johanyim/googol_translate
- Description:**
This is a web application which translates words and phrases to various written tones and voices to suit different contexts and audiences. It utilizes a cloud-based serverless compute service to handle incoming translation requests in a scalable and cheap manner.
- Outcomes:**
- Utilized my domain knowledge gained from education to adjust the hyperparameters of a general-purpose generation agent to handle the specific task of translation
 - Practised implementing web development patterns such as exposing endpoints, configuring CORS and managing application state and logic
 - Acquired a critical understanding of differences in cloud-based compute services and their use cases
 - Leveraged Rust's type system to produce a fault-tolerant system and self-recovering errors
 - Established GitHub actions to automate building and testing processes for continuous integration
- Tools:**
AWS (Lambda, API Gateway, Route53, S3), Rust, OpenAI, HTMX, GitHub Actions
- (2023) **Terminal-based Colour Palette Interface**  /johanyim/fingerpaint
- Description:**
This project implements a lightweight key-mapping application that assigns colours and colour formats to distinct keystroke combinations, automating the process of colour selection.
- Outcomes:**
- Practised type safety and awareness of memory layout by implementing a comprehensive, algebraic type system from functional programming design patterns
 - Practised error handling by defining control mechanisms to handle potential faults
- Tools:**
Rust (clap, crossterm, thiserror), X11/Wayland, Hyperfine (Benchmarking)

Education

- 2019 **Computer Science MComp (Hons)**
- 2023 **Master of Computing, University of Bath** Degree Class awarded: 2:1
Functional Programming (82%) · Machine Learning (77%) · Statistics for Data Science (73%) · Cryptography (78%) · Data Structures and Algorithms (82%) · Computer Systems Architecture (82%) ·
- 2017 **International Baccalaureate (IB)** 39 points overall
2019 HL Maths (7) – HL Physics (7) – HL Computing (5)