Oliver Paynter-Jones

+44 7984 297332 | opaynterjones@gmail.com | linkedin.com/in/olpaynter | github.com/olpaynter

Education

University of Bath — Bath, UK

BSc(Hons) Computer Science and Mathematics, ***First Class Honours*** — *Oct. 2022 – Jul. 2025*

Honours Thesis: Behavioural Biometrics: ML-Based Anomaly Detection for Anti-cheat ***(75%)*** — *View Full Thesis*

Christ the King College — Isle of Wight, UK

A-Levels: Further Mathematics, Mathematics, Computer Science, EPQ ***(A*)****; Economics* ***(B)*** — *Sep. 2020 – Jul. 2022*

Experience

Software Developement Engineer Internship — Jun. 2025 – Aug. 2025

Amazon — *Edinburgh Development Centre, UK*

- Took ownership of an open-ended problem and collaborated with a Senior Program Manager to build a tool to automate product intake and tracking workflows.
- Conducted stakeholder interviews and gathered requirements; authored comprehensive documents outlining system designs and recommending a chosen solution.
- Led reviews including peers, senior engineers, Bar-Raiser to gather feedback and secure alignment on the selected approach.
- Designed and implemented a TypeScript-based browser tool integrating internal issue management APIs with external software, replacing an error-prone manual workflow with a one-click or automated background process.
- Applied Storm 4 design standards and simplified setup and configuration, cutting onboarding time and making the tool accessible to a wider range of users.
- Integrated with internal build and deployment systems, implementing unit tests and CI/CD pipelines to ensure maintainability, reliability, and adherence to engineering best practices.
- Produced technical documentation and delivered a final presentation and live demo to engineers and managers, receiving highly positive feedback on the solution's quality, usability, and alignment with business needs.
- Received positive feedback for taking initiative, driving outcomes, fostering strongtrust with stakeholders and team members, and performing deep analytical work to inform decisions.

Projects

The Perfect Keyboard: A Genetic Algorithm Experiment | *Python* — Blog

- Built a genetic algorithm to optimise keyboard layouts for typing speed and comfort using frequency data from 246K-word corpus.
- Implemented custom crossover and mutation operators to evolve and identify the most efficient layout.

Society Matchmaker | *React, Flask, SQL, Git* — Blog

- Led an 8-member team tackling low student-society engagement; coordinated design, CI/CD, and version control practices.
- Developed key frontend features—user management, interest polling, and personalised event recommendations.
- Achieved a 150% improvement across two engagement metrics compared to existing systems.

Solving the Rubik's Cube with Group Theory | *Python*

- Researched and applied advanced mathematical group theory to model cube states and transitions efficiently.
- Engineered a Python solver using NumPy and pandas with custom cube encoding and decoding algorithms.
- Implemented a modified IDA* search with pruning, achieving sub-second solve times for any scramble.

Skills

Programming: Typescript, Java, Python, C++, Javascript, SQL
Infrastructure: AWS, CI/CD, Docker, Version Control (Git)
Frameworks/Libraries: React, Node.js, Flask, Webpack, JUnit, Jest, GitHub