

Oliver Paynter-Jones

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EDUCATION

University of Bath <i>BSc(Hons) Computer Science and Mathematics, First Class Honours</i> Honours Thesis: Behavioural Biometrics: ML-Based Anomaly Detection for Anti-cheat (75%)	Bath, UK Oct. 2022 – Jul. 2025 View Full Thesis
Christ the King College <i>A-Levels: Further Mathematics, Mathematics, Computer Science, EPQ (A*); Economics (B)</i>	Isle of Wight, UK Sep. 2020 – Jul. 2022

EXPERIENCE

Software Development Engineer Internship <i>Amazon</i>	Jun. 2025 – Aug. 2025 <i>Edinburgh Development Centre, UK</i>
<ul style="list-style-type: none">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 strong trust with stakeholders and team members, and performing deep analytical work to inform decisions.	

PROJECTS

The Perfect Keyboard: A Genetic Algorithm Experiment <i>Python</i>	Blog
<ul style="list-style-type: none">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 <i>React, Flask, SQL, Git</i>	Blog
<ul style="list-style-type: none">Led an 8-member team tackling low student-society engagement; coordinated design, CI/CD, and version control practices.Developed key frontend features including 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 <i>Python</i>
<ul style="list-style-type: none">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.

- 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