Sam Flattery

Software Engineer

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Work Experience

Google
Sunnyvale, CA

Software Engineer III (L4)
Oct 2023 - Aug 2024

- Worked on a new anti-abuse strategy that reduced damage caused by made-for-abuse accounts by XX% across Google
- Developed agile challenge policies in Java with configurable components, enabling rapid adaptation to evolving abuse patterns
- Engineered the frontend and backend of the remediation flow seen by XXXk potentially abusive users daily
- Designed and implemented a new gRPC endpoint merging the team's existing anti-hijacking solutions with these new anti-abuse solutions, which will serve Xk QPS
- Built comprehensive monitoring solutions (dashboards, real-time metrics, SQL) for impact analysis and issue detection

Google
Sunnyvale, CA

Software Engineer II (L3)
Sep 2022 - Oct 2023

- Worked on the Action Protection team, a subset of Google Sign-In responsible for protecting sensitive actions (e.g. password changes) with 2FA challenges to protect against hijacking
- Led a cross-functional project to streamline the 2FA enrollment flow for non-2FA users, coordinating with PMs, UX designers and technical writers to design key pages and user flows
- Implemented the full-stack solution, enabling seamless 2FA enrollment and execution of sensitive actions, unblocking XXk users daily
- Collaborated with clients including Gmail, Payments, and Ads to provide design reviews, integration support and land feature requests

Google
Ireland (Remote)

Software Engineering Intern
May 2021 - Aug 2021

- Worked on the Play Integrity API, a high-scale C++ platform assessing device-side integrity on over 1 billion Android devices daily
- Designed and implemented a principled pipeline to process device data for emulators, producing real-time integrity verdicts
- Extended the system that calculates preexisting integrity verdicts, increasing configurability, scalability, and debuggability

Google
Ireland (Remote)

Software Engineering Intern
May 2020 - Aug 2020

- Built a testing system in C++ to test the resource discovery system of Envoy (open-source L7 proxy) with randomized input paths
- Implemented an abstract state tracker that maintained the correct state of the system to ensure updates were properly processed
- Increased test coverage by 40% on key files, uncovering and fixing multiple production bugs

Education

Carnegie Mellon University
Pittsburgh, PA

B.S. in Computer Science, Concentration in Computer Systems
Aug 2018 - May 2022

- Cum. GPA: **3.91 / 4.00**
- Dean's List - High Honors (4 semesters), Dean's List (2 semesters)
- Selected courses:

15-410 Operating Systems
15-440 Distributed Systems
15-418 Parallel Computer Architecture
15-451 Algorithm Design & Analysis
15-281 Artificial Intelligence
15-445 Database Systems

Projects

The Atlas Project
Pittsburgh, PA

Software Lead
Aug 2019 - May 2021

- Managed the software team developing a fully autonomous gravity-powered vehicle
- Presented weekly briefings on software progress to the organization and assigned tasks to team members
- Integrated deep learning semantic segmentation into the vehicle's control mechanism

Skills

- **Programming Languages:** Java, C++, C, Python, SQL