Sam Flattery

Software Engineer

412-759-7626 | samflattery@gmail.com | samflattery | samflattery

Work Experience

Google
Sunnyvale, CA

Software Engineer III (L4)
Oct 2023 - Aug 2024

- Implemented and optimized anti-abuse strategies that reduced damage from 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 UX flow seen by XXXk users daily
- 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 challenging users attempting sensitive actions like password changes with 2FA challenges to protect against hijacking
- Streamlined the non-2FA user flow, enabling seamless 2FA enrollment and 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 SafetyNet Attestation API, an anti-abuse platform written in C++ which assesses device side integrity on Android devices
- Designed and implemented a principled way to process device information and produce an integrity verdict for a new class of device
- Designed a systematic way to process device information, producing new integrity verdicts for emerging device types.
- Extended the system that calculates preexisting integrity verdicts, increasing configurability, scalability, and debuggability.
- This new system is on the critical path to assessing over 1 billion devices daily

Google
Ireland (Remote)

Software Engineering Intern
May 2020 - Aug 2020

- Built a C++ testing system for 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 and uncovered/fixed multiple 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 F18, S19, F20, S21, S22)
- 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