

# Sam Flattery

## SOFTWARE ENGINEER

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## 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, Swift, SQL