Atyansh Jaiswal

Software Engineer · Security Researcher

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Work Experience

BLOCK — Privacy Engineering
San Francisco, CA

Staff Software Engineer — *May 2022 - Present*

- Leading Consent Management Framework at Block, built solutions for cookie consent across both Web and Mobile
- Worked on in house data deletion and export systems for privacy compliance
- Primarily using **Java**, **MySQL**, **Datadog**, **AWS**, **Snowflake**, **Terraform**
- Acted as an adhoc privacy analyst, surfacing and mitigating privacy concerns for Cash Contacts
- Created long term strategy for purpose based data classification and asset inventory

Meta — Privacy Infrastructure
Menlo Park, CA

Senior Software Engineer — *August 2017 - May 2022*

- Focusing on detecting and mitigating large scale scraping attacks on Facebook
- Build systems to observe, classify, and mitigate botted activity
- Understanding attacker intent, measuring signals, deducing patterns, and engineering features out of them
- Primarily using **Haskell**, **Hack**, and **Python**
- Additionally part of the **Privacy IMOC** oncall rotation where I'm responsible for coordinating response for privacy incidents at the company and postmortem reviews

Meta — Messenger Privacy
Menlo Park, CA

Software Engineer — *March 2020 - November 2021*

- Building infrastructure to make Messenger clients more secure and compliant with privacy regulations
- Created a differential privacy focused logging framework for both server and **iOS** client
- Built a real time engine to surface consent flows on mobile clients
- Created scripts for proper ownership classification for entire Messenger codebase
- Pioneered a new Messenger Security team focused on detecting and mitigating client side vulnerabilities
- Primarily using **Hack**, **C**, and **Python**

Meta — Ads Signals
Menlo Park, CA

Software Engineering Intern — *Summer 2016*

- Integrated real time aggregations for conversion optimization
- Worked on **C++** backend to ingest data and perform aggregations
- Implemented **PHP/HACK** endpoint to process API calls
- Created a **React JS** based UI to create aggregation rules
- Wrote a **thrift** service to send conversion data between PHP and C++ backend

Meta — Ads Infrastructure
Menlo Park, CA

Software Engineering Intern — *Fall 2015*

- Created a real time storage solution for an in-house object delivery distributed system in **C++**
- Improved network performance by implementing a more efficient serialization method
- Increased storage efficiency of connection objects in **HDFS** by 30%
- Used an in house real time key value storage system to deliver connection objects

Google
San Bruno, CA

Software Engineering Intern — *Summer 2015*

- Migrated YouTube V3 API from **Java** to **Python** backend
- Improved safety of video fetches across the YouTube backend
- Added improved permission validation support for video fetch requests

Viasat — Satellite Internet Analytics
Carlsbad, CA

Software Engineering Intern — *Summer 2014*

- Created a Page Load Metrics Collection and Analysis Framework
- Developed Firefox extension in **JavaScript** to measure web page load times
- Set up **Python Flask** server with **nginx** to ingest page load times
- Set up **ElasticSearch** and **Hadoop** storage systems for page load time analysis

Projects

Saber: Delegating Web Security to Browser
(Paper)

Graduate Researcher

- Created a prototype **Fetch API** that delegates web requests to Google Chrome
- Provide secure **TLS** connections to client applications without requiring any security expertise
- Also provide **strict transport security**, **public-key pinning**, and **revocation checking** for free

SPAM: Secure PAckage Manager *(Paper)*

Graduate Researcher

- Created a framework for package management using a federated Byzantine fault tolerant system
- Provide strong security guarantees against malicious developers, registries, and integration services
- Tied developer keys with online identities to build a federated trust network through endorsements

Multiplayer Brawler *(Video Game)*

Game Developer

- Created a 3D online multiplayer brawler in **C++**
- Built network engine using **Boost Asio**, server-client communication using **Google protobufs**, and physics engine using **Bullet**

Education

BS/MS in Computer Science *San Diego, CA*

University of California, San Diego *2012-2017*

- **Relevant Coursework—** Software Engineering, Computer Security, Programming Language Theory, Compiler Theory, Operating Systems and Networking, Cryptography, Networked and Distributed Systems
- **Thesis—** Analyzing and addressing the security issues of non-browser web-connected applications

Teaching Assistant *San Diego, CA*

University of California, San Diego *2016-2017*

- **Intro to Computer Security—**Control flow hijacking, MITM attacks, XSS, CSRF, JIT Spraying, SSL stripping, privacy
- **Programming Language Theory—**Haskell, lambda calculus, type inference, monads