YASH TULSIANI

EDUCATION

Georgia Institute of Technology May 2019
B.S. Computer Science
High Honors, Dean's List

CONTACT

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SKILLS

Languages: Java, Python, C, SQL, React
Systems: AWS, Kafka, HBase, Hadoop, MapReduce, Vitess, SQS, Spring
Core Concepts: Event Driven Architecture, Continuous Development, Site Reliability Engineering

PROJECTS

MBTA Mini Display
Designed and built a mini transit display showing real-time MBTA predictions, built from scratch with **self-taught skills**. Wrote **ESP32 firmware in C** to drive an OLED display and handle WiFi configuration, built a server API with **historical data fallback** for end-of-line predictions where MBTA data is sparse, designed and soldered a **custom PCB**, and 3D-printed enclosures.

Airbnb Analytics Dashboard
Scraped and analyzed Airbnb data at scale to explore correlations between listing features, review sentiment, and pricing. Built interactive visualizations with **d3.js** and applied **NLP sentiment analysis** to reviews and listing descriptions. View Project

My Angel Sight
Built a tool that analyzes if a driver is distracted while on the road. Used OpenCV to detect a person along with a convolution neural network to analyze their facial features. Hosted using Google Cloud Functions. **1st place winner and sponsor prize winner at HackAuburn 2019.** View Project

Why Engineers Need Hobbies
Wrote an article arguing that creative hobbies make better engineers by improving problem-solving and user empathy. Featured on the **front page of Hacker News** and multiple tech news sites. Read Article

Georgia Tech Transit Predictor
Built **ML models in Python** to predict bus arrivals for Georgia Tech's transit system, replacing basic location-based ETAs and powering the campus arrival estimator API used by thousands of students.

EMPLOYMENT

HubSpot Boston, MA
Senior Software Engineer 2, Critical Services *Oct. 2025 to Current*

- Led a zero-downtime migration of core CRM relationship metadata from hard-coded enums to a centralized, dynamic schema service, **coordinating changes across 100+ codebases**; this cut time-to-production for new relationship types **from weeks/months to minutes** and eliminated an entire class of rollback and scalability issues.
- Designed and shipped a new asynchronous write pipeline and quota-enforcement system for high-volume relationship updates on top of a wide-column datastore, working around the lack of transactional secondary writes while preserving strict read-your-writes guarantees; this eliminated prior limit breaches, reduced hot-spotting, and materially **lowered pager noise for a tier-1 service**.
- **Independently built** a rate-limiting diagnostics tool as a side project **after identifying recurring observability gaps**; gives engineers real-time throttling visibility, enabling downstream teams to self-diagnose and reducing time to debug production issues.
- Served as a **cross-team technical lead for two company-wide strategic bets**: an extensible "app-defined objects" platform that lets partners model rich domain data inside the CRM, and a new work management experience used across multiple product areas; owned relationship modeling, permissions, and reliability contracts so these products could safely build on shared CRM data.

Senior Software Engineer, Critical Services *Dec. 2023 to Oct. 2025*

- Owned reliability for HubSpot's highest-traffic services (**26B+ requests/day, sub-100ms p99 latency**); introduced client-level isolation and async write logic that smoothed peak traffic while preserving read-your-writes consistency.
- Partnered with downstream teams to redesign access patterns and root-cause long-standing **race conditions and performance issues in distributed systems**, eliminating HBase hotspotting while strengthening rate limiting to prevent single-client platform instability.
- Designed, built, and backfilled a high-volume secondary table to support a new relationship access pattern, balancing atomicity requirements for downstream consumers with a design that remains scalable and maintainable as more teams adopt it.

Technical Lead *Aug. 2022 to Dec. 2023*

- Led a team of three engineers, setting technical direction and roadmap, and fostering a strong culture of product-focused engineering.
- Designed and implemented a custom property validation system for imports that used caching, batching, and selective requests only where failures were possible, significantly reducing load on downstream services and improving import performance.
- Identified and removed sources of serial processing in Kafka workers, increasing throughput and lowering latency; wrote up the work for the HubSpot engineering blog.
- Owned major evolutions of the Public Export API, including introducing export limits in both UI and API and designing an **abstraction that reduced cognitive overhead for users** while remaining easy to maintain as internal schemas evolved.

Senior Software Engineer *Jan. 2022 to Aug. 2022*

- Architected and implemented a cross-product read-only pipeline that guarantees immutability of closed deals, including **a major overhaul of the permissions system** to support granular, object-level access control, while keeping tier-1 service reads **within strict latency SLOs**.
- Proposed, prototyped, and built pre-import data validation, initially as a hackathon MVP to get buy-in, which became **one of the most-used features in the product**, now validates **20,000 imports per day**, improves import **accuracy by 40%**, **earned an internal award**, and helps new customers start with clean CRM data from day one.

Software Engineer *Oct. 2020 to Jan. 2022*

- Spearheaded the backend design and implementation of flexible relationship support in the imports pipeline, enabling customers to import complex CRM associations at scale.

Broadcom (Pivotal Software) San Francisco, CA
Member of Technical Staff II *Aug. 2019 to Oct. 2020*

- Identified long-standing Cryptominer abuse raising infrastructure costs; designed, built, and regression-tested prevention and detection systems across the platform

Mailchimp Atlanta, GA
Software Engineering Intern *Aug. 2018 to Dec. 2018*