

Tony Situ

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EXPERIENCE

META | PRODUCTION ENGINEER ON INSTAGRAM (IG)

Sep 2018 – Present | Menlo Park, CA

- Manager/Peer Reviewer for 2 interns, handled ramp-up for teammates/new-hires, and served as a mentor within my org.
- Avid SEV coordinator and created new SEV reviews to address product/infra gaps. Volunteered on IG Core Oncall, a purely voluntary rotation that protects sitewide reliability and serves as the first point of contact for major IG related outages.

Team: Instagram Continuous Integration and Deployment

- Replaced storage backend (Cassandra) in local and remote environment with a lightweight in-memory shim. This massive cross-functional effort led to big jumps in performance and reliability for the IG CI/CD system and reduced resource needs.
- Migrated new lightweight Cassandra-less jobs to cheaper server hardware, earning performance and capacity budget wins.
- Worked with ML team to integrate a model that dynamically selects tests based on developer changes rather than running all tests. This brought down wall time for test signal from 1 hour to 15 minutes, a 75% improvement that was crucial to scaling development at IG as the number of developers and changes grew.
- Developed a system to handle flaky signal at IG. This new system would automatically calculate and store a 'flaky score' for tests and transition them between enabled and disabled states to ensure high-quality signal for IG developers.
- Refactored host reservation to avoid race conditions in our CI/CD pipeline leading to another reliability win for job signal.

Team: Instagram Privacy, Security, and Integrity

- Took ownership of Pysa at IG, a static analysis tool used to detect privacy and security issues in Python code. Extended our CI system to run Pysa jobs on every IG diff and escalate to oncalls when we detect new violations in IG code. This let us uncover existing issues and blocked multiple new SEV-level security issues and privacy violations from being released.
- Rebuilt IG signal platform's backfill system to have over 300% additional throughput allowing it to be reliable even when fanning out to billions of rows compared to only handling on the order of hundred-millions previously. This let IG recover from large-scale outages of our ML platform and ensures delivery of critical content scores for downranking, takedown, etc.
- Uncovered a large instrumentation and error handling gap in our human reviewer system leaving bad content unactioned on our platform. Driving an metrics overhaul and working across teams to redefine ownership of their integrity jobs.
- Extended linting system to detect sensitive user PII data not being handled according to compliance requirements.

META | PRODUCTION ENGINEERING INTERN ON FACEBOOK

May 2017 – Aug 2017 | Menlo Park, CA

- Built tooling for triaging issues with a core internal service that auto-remediated failures across the entire fleet.
- Identified race conditions in the auto-remediation system, and implemented new locking system to prevent future issues.

EMC | SOFTWARE ENGINEERING ON NEUTRINO

Jan 2016 – Aug 2016 | San Francisco, CA

- Built infra to dynamically size floating IP blocks and added instrumentation, logging, and backups for the existing system.
- Integrated a new object storage component for the cloud platform.
- Developed proof-of-concept for integrating Octavia into our cloud platform. This would be a high priority feature that offers Load Balancing as a service to customers.

MCORELAB | SOFTWARE ENGINEERING INTERN

June 2015 – Aug 2015 | Reno, NV

- Extended API of OpenStack (Horizon and Nova) to include new features.
- Developed GUI and web framework for a memcached management platform.
- Automated product installation and patching on remote servers.
- Scripted vNIC attachments and vCPU affinity assignments for virtual instances.

EDUCATION

UC BERKELEY | BS IN ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

Graduated 2018 | Berkeley, CA

GPA: 3.607