

Jack Hallam

Software Engineer

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Bachelor of Science in Software Engineering and Economics
Rose-Hulman Institute of Technology / Terre Haute, IN / 2014 - 2018

Microsoft

Software Engineer / Redmond, WA / 2018 - Present

Built, supported, and maintained highly available live services handling 1,000+ RPS and powering billions of dollars per year in commerce transactions including Azure, Xbox, and Office.

- Designed and implemented gift-card code fraud detection
- Overhauled redeem transactions flow (i.e. gift-cards) and increased service reliability to 99.99% from 99.9%
- Designed and implemented industry leading EU regulatory compliance (for PSD2 regulations) into our live services
- Improved design for in-app purchase developer payout
- Modernized promotional codes during online ordering
- Implemented CI/CD build and deployment pipelines with full security and static code analysis
- Provided on-call support for multiple live services totaling 1,000+ RPS and millions of dollars of financial transactions per hour

Microsoft

Software Engineer Intern / Redmond, WA / Summer 2017

12 week internship improving latency of asynchronous worker-queues that control key business processes such as Xbox Live subscription renewal and post-checkout customer billing.

- Designed, built, tested, and deployed a customized distributed messaging queue system to replace a legacy SQL based implementation
- Gathered requirements from key stakeholders including manager and senior developers
- Tested multiple distributed messaging queue systems and documented findings; selected Apache Kafka after thorough cost analysis
- Designed and presented a custom solution with Apache Kafka and an api adapter to use as a drop-in replacement of the old messaging queue system
- Tested system locally and documented performance to give baseline for production sizing
- Flighted system to shadow live traffic and verified performance and correctness
- Deployed in production; measured latency improvement of 100x (99th percentile to <100ms)

Groupon

Software Engineer Intern / Chicago, IL / Summer 2016

12 week internship developing the next generation of the Third-Party Inventory Platform. The service allowed independent third-party merchants to sell goods and experiences on the Groupon marketplace.

Doxpop

Mobile Development Intern / Richmond, IN / Summer 2015

12 week internship developing a native Android application expanding existing web-app features.