Sean Collins
SENIOR SITE RELIABILITY ENGINEER

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Experience

WebstaurantStore   *Remote*
SENIOR SITE RELIABILITY ENGINEER   *2023 —*
- **Primary experience: Python, Docker, C#, Ansible, Kubernetes**
- Designed and implemented a malware scanning microservice against MinIO.
- Developed a tool to automate local provisioning of a microservice environment, speeding up local development.
- Instrumented ASP.NET and Flask web applications end-to-end into Grafana via the OpenTelemetry framework.

LinkedIn   *Sunnyvale, CA*
SENIOR ENGINEER, SITE RELIABILITY   *2017 — 2022*
- **Primary experience: Python, MySQL, Java, Go, Linux**
- Created distributed agent for MySQL infrastructure, which consolidated monitoring, alerting, and metrics emission for all 1000+ database servers into a single consistent codebase.
- Created streamlined tool to automate common operational tasks, reducing time spent by up to 40%.
- Consulted for 2-3 projects per quarter as a Python automation subject matter expert.
- Collected data to highlight where human hours could be automated away on a monthly cadence.
- Exposed live customer availability metrics via an internal dashboard.
- Represented relational storage in various horizontal initiatives, in the areas of observability, alerting/metrics, and operations at scale.
- Reduced change-related production issues by applying existing tooling to test, canary, and gradually roll out new infrastructure changes.
- Participated in an on-call rotation; applied measured analysis and intervention to maintain site stability.

Toontown Rewritten   *Remote*
TECHNICAL OPERATOR / GAME DEVELOPER   *2020 — 2022*
- **Primary experience: Kubernetes, Helm, Panda3D (Python)**
- Designed and implemented a Helm-based deployment system, resulting in an increase in deployment velocity from once per quarter to several times per month.
- Migrated all customer data, update history, and database backups between cloud providers with minimal customer-facing downtime.
- Developed core features and new content via the Panda3D game engine.

Selected Projects

MinIO malware scanning service
MINIO, RABBITMQ, CLAMAV, PYTHON, DOCKER, KUBERNETES   *2024 —*
Automated malware scans against object data.

The service was designed to address scaling, consistency, and flexibility issues with a previous malware scanning solution. Upon a new object upload, the service submitted a scanning job to a worker pool. A worker would stream the data to memory and scan it for malware. The worker pool could be scaled up and down depending on the volume of new objects to scan or time of day.

mysqlmon
PYTHON, MYSQL   *2019 — 2022*
A distributed, agent-based monitoring, alerting, and availability framework.

mysqlmon was a distributed agent which enabled hosts to monitor, alert, and expose live metrics of themselves on a strictly enforced minute cadence. Release in the agent resulted in a major paradigm shift in the team, enabling full operational onboarding of new engineers within one month and reducing operational overhead within the team to the extent that others could begin building infrastructure of their own.

Education

Georgia Institute of Technology (Georgia Tech)   *Atlanta, GA*
B.S. COMPUTER SCIENCE, CHINESE MINOR   *Aug 2012 — Dec 2015*
- Specialized in computer architecture, distributed systems, database systems, and networking.
- Studied at Shanghai Jiaotong University as part of a business and technology Chinese immersion program.