

Taylor Wrobel

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Experience

Symbolica AI

Menlo Park, CA

Co-Founder / Secretary of the Board / Head of Infrastructure

July 2022 - November 2023

- Developed Clickhouse and PostgreSQL based data storage for training and instrumenting ML models
- Maintained infra for performing training runs, and dashboards for visualizing results (Metabase, and later Grafana)
- Sourced, interviewed, hired, and managed engineers increasing company size from zero to 10
- Handled investor relations, vendor partnerships, corporate real estate and finances, information technology, and HR

OpenSea

Remote / San Francisco, CA

Software Engineer / Engineering Manager

October 2021–July 2022

- Managed the data platform team during a period of leadership churn and company hyper-growth
- Introduced ScyllaDB and Elasticsearch for NFT event data to alleviate pressure from an over-index Postgres table
- Worked to improve data platform reliability and maintainability through improved on-call processes and alerts
- Organized and ran several large-scale data migration and repair operations on the production Postgres database

GitHub, Inc.

Remote

Staff Software Engineer

November 2019–October 2021

- Lead re-architecting of the GitHub Packages product and served as technical lead for the GitHub Container Registry
- Implemented data infrastructure integrations within the Go codebase including a data access layer on top of MySQL, a search and indexing client using Elasticsearch, and messaging infrastructure on Apache Kafka
- Established a paved path for products to break out of the GitHub ruby monolith and into a microservice architecture
- Coordinated cross-functionally with teams on authentication, authorization, infrastructure, and other GitHub features such as Actions and Codespaces
- Established high quality monitoring, alerting, and observability implementations

Apple, Inc.

Cupertino, CA / Culver City, CA

Senior Software Engineer (2016-2019) / Software Engineering Manager (2019)

April 2016–November 2019

- Lead development of a large scale service responsible for the storage, aggregation, and visualization of test results
- Improved performance of critical path operations by over an order of magnitude through data schema, system architecture, and business logic improvements
- Managed the Platform Test Infrastructure team, a small team focused on providing world class internal tooling within the testing domain to developers across Apple
- Implemented distributed tracing, monitoring, and alerting for applications within the team's domain

Aurora Technology, Inc.

San Francisco, CA

CTO and Lead Engineer

September 2014–April 2016

- Founding member of a team working to bring non-predatory automated lending to developing countries
- Designed and implemented a micro-service architecture with focus on scalability, security, and data consistency
- Lead a team of 5 other engineers in writing and deploying a scalable financial services platform
- Enforced good coding practices via required code reviews, documentation, and unit and integration testing

Palantir Technologies

Palo Alto, CA

Simulation Software Intern (2012) / Engineer (2013-2014)

May 2012–September 2014

- Worked with members of the SSE team to address issues of continuous code delivery and code quality via automation
- Lead development on an automated system to validate integrity and completeness of production data
- Maintained and improved the front-end automation regression tests and infrastructure for the Java client
- Created an internal tool to oversee and manage a cluster of virtual machines used for UI testing

Highlighted Projects

GitHub Container Registry

GitHub, Inc.

- OCI-compliant container registry integrated with GitHub, available at ghcr.io
- Tech stack consisting of Golang and Ruby on Rails on the application layer, infrastructure consisting of MySQL, Apache Kafka, and Elasticsearch, and Twirp for server-to-server RPC operations
- Re-architected the GitHub Packages product as a standalone microservice external to the GitHub monolith
- 99.99%+ availability while meeting strict latency requirements
- Integrated seamlessly with GitHub Actions and Codespaces, the GitHub authentication and authorization mechanisms, and internal GitHub infrastructure such as audit log and search clusters

Test Result Store

Apple, Inc.

- Tech stack included Node.js on the application layer, Cassandra for primary data storage, Redis for caching and pub/sub events, and Blob storage for large file storage
- Scaled service up to 200M assertions ingested per week (250x increase from starting on the project)
- Supported both traditional unit and integration tests, as well as synthetic monitoring test data
- Integrated with a mix of OSS and proprietary systems for logging, tracing, app-to-app communication, and auth
- Implemented an event log using a mix of Cassandra and Nats for fast loading of event history handing off transparently to a live stream of events over chunked HTTP responses

Authentication Proxy

Apple, Inc.

- Go HTTP reverse proxy to transparently handle user authentication against Apple's internal authentication system
- Individually authored during nights and weekends, and voluntarily submitted for information security review
- HMAC signing of user data with mechanisms to mitigate MITM and replay attacks
- Features included multi-tier caching, rate limiting, tracing, multimodal auth support, and logout mechanisms
- Actively used by various production and non-production use cases across the company

Education

Georgia Institute of Technology

Bachelor of Science in Computer Science

Focuses on Media & Information Internetworks

Atlanta, GA

2009–2013

Programming Languages and Tools

Proficiency

- Go
- Rust
- Git
- Node.js
- Java
- SQL/CQL

Working Knowledge

- HTML and CSS
- Bash
- C/C++
- Python
- HCL
- L^AT_EX

Skills

Distributed Systems Concepts: Raft, Paxos, CRDTs, CAP/PACELC, 2 Phase Commit

Data Structures: Lists, Trees, Graphs, Hash Tables/Maps, Hash Chains, Probabilistic Data Structures

Algorithms and Paradigms: Sorting Algorithms, Concurrency (CSP, Shared Memory, Callbacks), Graph Theory

Data Systems: Scylla, CockroachDB, MySQL, Redis, Elasticsearch, NATS, PostgreSQL, Apache Kafka

DevOps Platforms: Kubernetes, GitHub Actions, Microsoft Azure, AWS, Zipkin, Splunk

Managerial: Nonviolent Communication, Implicit Bias Awareness, Behavioral Interview Experience, Inclusion & Diversity