Michael Sparre

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Work Experience

Founding Engineer, Grepr — San Francisco, CA   Jan 2025 − Present

- Optimized a core reducer algorithm by 30%, leveraging flame graph analysis to identify and eliminate critical performance bottlenecks
- Engineered a custom Kubernetes Operator in Java to introduce a declarative Pipeline CRD, enabling us to define and manage the entire lifecycle as code directly within our EKS environment
- Bolstered data pipeline resilience by implementing robust error handling and retry mechanisms for asynchronous writes, eliminating data loss from transient system failures

Software Engineer, Gilead Sciences — Bay Area, CA   May 2021 − Dec 2024

- Architected a self-hosted monitoring solution using Grafana and Prometheus, integrating multiple data sources to provide comprehensive insights into AWS data lake operations and Postgres-based data products
- Reduced monthly AWS expenditure by over 25% by developing 12 Grafana dashboards that provided key insights into infrastructure costs and resource utilization
- Led the development of over 10 Python-based data processing projects by designing core components, establishing coding standards, and mentoring a team of 3 engineers

Projects

ranked   ranked.michaelsparre.com

- Engineered a Python FastAPI backend for a media ranking platform, implementing a custom binary sort algorithm for rating generation and a recommendation engine to deliver personalized content suggestions
- Orchestrated the entire deployment lifecycle on a self-hosted VPS using Docker Compose, establishing a robust observability pipeline with Grafana for proactive, real-time application and server monitoring
- Architected and implemented over 30 RESTful API endpoints to manage user authentication, data persistence, and integration with multiple third-party APIs, providing real-time search access to a library of 500,000+ media items

Skills

Languages: Python, Java, SQL, TypeScript, Bash
Cloud & DevOps: AWS (EKS, S3, EC2), Kubernetes, Docker, Terraform, Grafana, Prometheus, CI/CD
Technologies & Tools: Git, React, Kafka, Apache Flink, PostgreSQL, FastAPI, SQLAlchemy

Education

University of California, Berkeley   May 2022
Bachelor of Science in Electrical Engineering and Computer Sciences