Sidak Manchanda

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SKILLS

Languages: Go, C, C++, Python, Java, Elixir

EXPERIENCE

GOOGLE, Software Engineering Intern   May 2020 – Aug 2020 | Remote
- Designed and implemented a concurrent transaction management system in Go for workload deployments to Kubernetes clusters
- Encapsulates updates to objects in cluster as atomic transactions with configurable levels of concurrency
- Ensures serializability and adds configurable error detection and automated rollback mechanisms

FACEBOOK, Production Engineering Intern   Jan 2020 – Mar 2020 | Menlo Park, California
- Rewrote the management daemon for GlusterFS, an open source distributed file system, to seamlessly integrate with Facebook's internal services in Go
- Designed and implemented leadership and consensus mechanisms to propagate updates to storage nodes
- Benchmarked and optimized performance metrics for bare-metal and containerized deployments

APPLE, Software Engineering Intern   May 2019 – Aug 2019 | Cupertino, California
- Created Container Runtime for Darwin in Go & C to encapsulate and schedule Darwin instances on Linux
- Dynamically partitioned instances with Linux namespaces and developed software-defined networks for inter-container communication
- Integrated with workload orchestrators, and Kubernetes through the Container Runtime Interface

SHOPIFY, Infrastructure Engineering Intern   Sep 2018 – Dec 2018 | Montreal, Quebec
- Designed and implemented service in Go and Java to automate database backup recovery for the entirety of Shopify's search infrastructure processing billions of documents across multiple clusters
- Service regularly restores and verifies backups for all Elasticsearch clusters in an isolated environment
- Automated expansion of persistent volume claims in Kubernetes through updates from custom controllers

PAGERDUTY, Software Engineering Intern   Jan 2018 – Apr 2018 | San Francisco, California
- Developed microservice in Elixir that consumes 100's of alerts per second from Kafka, stores them into an Elasticsearch cluster, and provides customers the ability to query alerts in real-time
- Reduced response times by over 200% for customer-facing infrastructure monitoring tools by introducing concurrent data fetching using Ember.js concurrency

DOCTORCARE, Application Developer Intern   May 2017 – Aug 2017 | Toronto, Ontario
- Developed online report pipeline in Python to collect and parse medical finance information for doctors
- Used SciPy to develop optimization algorithms generating up to $800 in revenue per doctor per year

PROJECTS   More at github.com/SidakM

ZOOKDNS: Service Registry and DNS Server ⬈   Java
- Created service registry and authoritative DNS server that uses sequential and ephemeral nodes in ZooKeeper to support service discovery over DNS

EDUCATION

Bachelor of Computer Science   Sept 2016 - May 2021
University of Waterloo