

Sidak Manchanda

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SKILLS

Languages: C++, C, Go, Python

EXPERIENCE

GOOGLE | SENIOR SOFTWARE ENGINEER

Sunnyvale, California | Jun 2021 – Current

- TL Borg Node Architecture: System responsible for launching processes and workloads on Google's machines.
- Envisioned and lead of gRuntime: a composable runtime that provisions workloads within containers, Virtual Machines and compositions thereof.
- Enabling ML Workload Efficiency & Confidential Compute by leading the design, integration and delivery of a native Virtual Machine runtime within Borg

GOOGLE | SOFTWARE ENGINEER INTERN

Remote | May 2020 – Aug 2020

- 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 ENGINEER INTERN

Menlo Park, California | Jan 2020 – Mar 2020

- Rewrote the management daemon for GlusterFS, an open source distributed file system, to seamlessly integrate with Facebook's internal services in Go
- Implemented leadership and consensus mechanisms to propagate updates to storage nodes
- Benchmarked and optimized performance metrics for bare-metal and containerized deployments

APPLE | SOFTWARE ENGINEER INTERN

Cupertino, California | May 2019 – Aug 2019

- Created Container Runtime for Darwin in Go & C to encapsulate and schedule Darwin VM instances on Linux
- Integrated with workload orchestrators, and Kubernetes through the Container Runtime Interface

SHOPIFY | INFRASTRUCTURE ENGINEER INTERN

Montreal, Quebec | Sep 2018 – Dec 2018

- 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 ENGINEER INTERN

San Francisco, California | Jan 2018 – Apr 2018

- 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

Toronto, Ontario | May 2017 – Aug 2017

- 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

EDUCATION

Bachelor of Computer Science
UNIVERSITY OF WATERLOO

Waterloo, ON | Sept 2016 – May 2021