Ridwan Sharif

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Skills

- Experienced with Go, C, C++, Ruby, Python, Lisp; Rails, SQL, Docker, Redis, Memcached and gRPC
- Interested in distributed systems, databases, infrastructure, performance and systems design

Work Experience

Cockroach Labs Sep – Dec '18
Backend Engineering Intern (Storage/Performance) *New York, NY*

- Designed and implemented load based partitioning, replication and distribution of data across nodes
- Improved overall read/write throughput by over 50% and reduced end-to-end latency by over 40%
- Refactored CockroachDB's transaction model to support idempotent intra-transactional requests
- Implemented workload generators to simulate different loads, distributions and request patterns
- Authored an RFC and improved infrastructure for granular control over data partitions to service geo-distribution and data compliance guarantees.

Shopify Jan – Apr '18
Production Engineering Intern (Infrastructure) *Ottawa, ON*

- Led multiple engineering initiatives outlining measures to improve observability standards across Shopify
- Redesigned Shopify's incident response system to support reporting mechanisms, introspection, and severity escalations – featured in SREcon and in Shopify's engineering blog
- Built instrumentation around cluster/service health, to track SLOs, uptime, throughput, and error rates

NCR Corporation May – Aug '17
System Software Engineering Intern (Infrastructure) *Waterloo, ON*

- Designed a NIST compliant password manager to manage private credentials for multiple teams
- Used throughout the infrastructure division across multiple teams, saving ~18,000 USD annually

Research

uWaterloo Database Systems Group May – Aug '18
Undergraduate Researcher (Prof. Grant Weddell) *Waterloo, ON*

- Researching main-memory databases that use dynamic code-generation as part of its execution model

Projects

raft *git.io/v59cj*

- Implemented Raft, a fault tolerant and performant distributed consensus algorithm resilient to lossy networks, network partitions and node failures – based on Diego Ongaro's thesis paper

mqueue *git.io/vMKXe*

- Constructed an in-memory Kafka-esque message broker in Go over an HTTP API

Other notable projects: **lispy**, **gcache**, **go-workerpool**, **pRSA**, **fzysearch**, **airport**

Education

University of Waterloo Sept '16 – Apr '21 *(expected)*
Bachelors of Computer Science, Honours

- UW Robotics Club, Hack the North (2017, 2016), President's Scholarship (95^{th} percentile)