Ridwan Sharif

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Skills

- Experienced with Go, C, C++, Ruby, Rails, Python, SQL, Elixir, Docker, Redis, Memcached
- Interested in Microservices, Distributed Systems, Systems Design, Infrastructure and Security

Work Experience

Shopify Inc. Jan – Apr '18
Production Engineering *Ottawa, ON*

- Implemented an Ops portal streamlining the workflow from failure detection to closing the postmortem
- Designed incident response tooling to guarantee a clear chain of command, distinct levels of escalation, automated record storage, a command portal, external communication support, and incident introspective tooling – Featured in SREcon, subject of one of Shopify's engineering blog posts
- Led multiple product design reviews outlining detailed plans of implementing an improved Incident Management architecture. Went on to deploy v1 into production for the On-Call teams at Shopify
- Built cluster and service health tools improving observability across all Shopify services: involved tooling to define and track SLOs by measuring metrics such as uptime, throughput and error rates

NCR Corporation May – Aug '17
Infrastructure *Waterloo, ON*

- Designed a NIST compliant password manager to manage private credentials for multiple teams
- Implemented all components of the vault: security protocols, the storage layer, and the client portals.
- Saved ~18,000 USD annually. Used throughout the infrastructure division, across multiple teams/offices
- Shouldered an operational role with cluster maintenance, ACL management, audit trails, and malware protection (WannaCry). Closely worked with VRealize and VMware technologies

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 implementation on Diego Ongaro's thesis paper
- Designed log truncations, replications, snapshots, and leader elections to manage replicated states
- Used protocol buffers with gRPC for the underlying RPC subsystem, implemented entirely in Go

mqueue *git.io/vMKXe*

- Constructed an in-memory Kafka-esque message broker in Go over an HTTP API
- Designed a concurrent, thread-safe publisher/subscriber architecture with multiple topics

lispy *git.io/vyfVt*

- Built a robust Scheme/LISP interpreter in Python based on Peter Norvig's implementation
- Added facilities for lexical scoping, errors, abstract list functions, and user defined data structures

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

Education

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

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