

# RIDWAN SHARIF

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## SKILLS

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

## WORK EXPERIENCE

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### Shopify, Inc.

Jan – Apr '18

*Production Engineering Intern (Infrastructure)*

*Ottawa, ON*

- Led multiple design reviews outlining measures to improve observability standards across Shopify
- Redesigned core components of Shopify's incident response system to incorporate reporting mechanisms, introspection, and severity escalations – featured in SREcon and in Shopify's [engineering blog](#)
- Developed a streamlined workflow from error detection, failure mitigation, to postmortem publication
- Built cluster/service health protocols to add instrumentation across all Shopify services, to define and track SLOs, and measure 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.
- Shouldered an operational role with cluster maintenance, ACL management, and malware protection

## RESEARCH

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### uWaterloo Database Systems Group

May – Aug '18

*Undergraduate Researcher*

*Waterloo, ON*

- Researching main-memory, "compiling" databases that use dynamic code-generation techniques as part of its query execution model
- Studying query optimization, code synthesis, and transaction compilation with Prof. Grant Weddell

## PROJECTS

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### 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](#)
- 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

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

## EDUCATION

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### 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<sup>th</sup> percentile)