

RIDWAN SHARIF

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SUMMARY

- Experienced with distributed systems, databases, operating systems, infra, performance and backend
- Proficient in Go, C, C++, Ruby, Python, Lisp, Java, SQL; Rails, Docker, and gRPC

WORK EXPERIENCE

Google *Sunnyvale, CA (remote)*
Backend Engineering Intern (gVisor) May – Present

- Worked on expanding the gVisor kernel by supporting Linux compatible sandboxed FUSE filesystems
- Built the FUSE kernel module, device drivers, filesystem syscalls and the FUSE protocol in gVisor

Postmates *San Francisco, CA*
Platform Engineering Intern (Delivery as a Service) Jan – Apr '18

- Built the DaaS invoicing and billing system, reducing unrecoverable debt by **\$50,000+** annually
- Architected the debt collection service by integrating with BigQuery, GCS, Square, Shopify, Stripe

Cockroach Labs *New York, NY*
Backend Engineering Intern (SQL Optimizer) May – Aug '19

- Worked on query compilation, transformation and optimization of joins, limits, indexes and more
- Added support for multi-table mutations, ordered aggregations, segmented sort and look-up joins
- Implemented index-skip-scans to improve index scan performance by an order of magnitude

Backend Engineering Intern (Distributed SQL) Sep – Dec '18

- Designed and implemented load based splitting to replicate and distribute ranges of data across nodes
- Improved overall read/write throughput by over **60%** and **halved** end-to-end latency
- Added transactional request ordering, savepoints and idempotency to solve the Halloween Problem

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

- Led multiple engineering initiatives outlining measures to improve observability across Shopify
- Built incident report and cluster health tooling that was featured on the Shopify engineering blog

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

- Designed a NIST compliant password manager used by multiple teams saving **\$18,000+** annually

EDUCATION

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

RESEARCH

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

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

PROJECTS

- **raft** – A performant distributed consensus algorithm; based on Diego Ongaro's thesis paper
- **mqueue** – Constructed an in-memory Kafka-esque message broker in Go over an HTTP API

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