Hamza Yusuff

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SKILLS

- Interested in back-end, infrastructure, distributed systems, full-stack, systems design and algorithms
- Fluent in Python, Go, C++, Django, FastAPI, Racket, React, Pandas, Bash, PowerShell, Git

EXPERIENCE

Samsung Ads *Toronto, ON*
Software Engineering Intern May – Sept '22

- Incoming software engineering intern on the Golang backend team responsible for real time bidding

NCR Corporation *Waterloo, ON*
System Software Engineering Intern (Infrastructure) Sept – Dec '21

- Independently rewrote a multi-threaded and multi-processed Internal Software in **Python** to manage **25000+ VMs**, which optimized performance by **110%+** and fixed multiple production level errors
- Developed an **IP Query Tool** with Django to facilitate information retrieval, of NCR VMs and data centers, across **6500000+** IPv4-addresses; improved **security** and **network** management of the team
- Wrote python scripts, and LDAP queries to reduce auditing of **4200+** Azure VMs by **300+** hours

Hexa *Waterloo, ON*
Founder, Back-end and Infrastructure Nov '21 – Present

- Led development of a multi-service EdTech platform with **3 million** user base across **100+ countries**
- Developed the **Django** back-end, and **horizontally scaled** infrastructure to handle **3x** more requests
- Integrated load balancer, CDN, and provisioned single node PostgreSQL cluster with connection pooling to scale to **10,000 req/sec** with **5x faster page load-times** and **reduced database-overhead**
- Automated back-end data aggregation and population, reducing launch-time by **4 months**

Chittagong Grammar School *Chittagong, Bangladesh*
Software Engineering Intern Aug – Dec '20

- Built a web app using **React** and **Firebase** for **600+** users to collaborate, saving **$6000** annually

Chittagong Medical College Hospital Cancer Department *Chittagong, Bangladesh*
Software Engineering Intern Apr – Jul '20

- Built a Patient Database Management System with Django, and a CRUD API with Django REST
- Deployed the API with PostgreSQL by configuring Nginx and Gunicorn inside an Ubuntu instance

PROJECTS

Distributed Log Service

- Developing a **distributed log service** in **Go** with **load-balancing**, **service discovery**, and **Raft**
- Built a **persisted commit log library** to support replicated state machines with Log Replication
- Created JSON/HTTP web server for the log service, and setup protocol buffers for gRPC client-server

Lisp-ython

- Implementation of a light-weight Interpreter and Transpiler written in Python for Lisp and Racket
- Transpiles infix math operations, cons, function declaration in **Racket** to **equivalent Python code**
- Interpreter supports user-defined procedures, lambda calculus, conditionals and basic data structures

EDUCATION

University of Waterloo *Sept '20 – Apr '25 (expected)*
Candidate for Bachelor of Computer Science, Dean's Honours List, Fall 2020