Mohammed **Bilal** Akhtar

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Interests

Databases

Distributed systems

Backend web development

Cloud computing

Student advocacy

Biking

Technologies

Python

Erlang

Go

Ruby

JavaScript / Node.js

Java

HTML / CSS

C / C++

Scala

AWS

Linux / Unix

SQL

Work Experience

Facebook (WhatsApp), Software Engineer Intern   01/2018 – 04/2018
Menlo Park, California

- Implemented new Erlang microservices for logging client requests, allowing for 16x more requests to be logged than previous setup
- Migrated two production microservices to a new internal distributed KV store, and figured out optimal sharding and partitioning strategies
- Calculated capacity numbers and maintained heavily trafficked containerized services in production while being on-call

Cockroach Labs, Backend Engineering Intern   05/2017 – 08/2017
New York City

- Added the ability to inspect ongoing client sessions across clusters running CockroachDB, a distributed SQL database
- Designed and implemented a mechanism to cancel queries in-flight, including queries with a multi-node workload
- Wrote RFC design documents to achieve consensus on project specifics before beginning implementation

Amazon, Software Developer Intern   09/2016 – 12/2016
Toronto

- Worked on Java microservices responsible for selecting destination warehouses for goods sent by third-party sellers
- Set up AWS SNS, Lambda, and Kinesis streams to efficiently move incoming audit data to DynamoDB and Redshift at scale
- Architected and built an internal website using Flask and Backbone to investigate placement decisions, which reduced on-call workload

PagerDuty, Application Developer   01/2016 – 04/2016
Toronto

- Optimized notification generation in Scala microservices for large bursts of incidents, increasing incident-handling capacity by 10x
- Executed long-running database migrations directly in production while preserving availability

Activities

- Ran SQL and Ruby workshops with ~150 participants
- Active student senator in the University senate

Education

University of Waterloo,   09/2014 – 06/2019
Bachelor of Software Engineering (co-op)

- 3.95 GPA (Dean's Honours List recipient)