

# Mohammed Bilal Akhtar

## Technical skills

**Areas of interest:** Distributed Systems, Data Stores, Backend Development, Linux/Unix, SRE

**Languages:** Python, Erlang, Go, JavaScript, Java, Ruby, C, C++, Scala

**Technologies:** SQL, AWS, Bash, Git, Node.js, React, Thrift, gRPC

## Experience

**Software Engineer Intern at Facebook (WhatsApp),** Menlo Park, CA 01/2018 – 04/2018

- Designed and implemented a new Erlang microservice for logging client requests, increasing request logging capacity by 16 times compared to previous setup
- Calculated required capacity and migrated an existing chat service to Facebook's container infrastructure and new key-value store, while being on-call and maintaining availability

**Backend Engineering Intern at Cockroach Labs,** New York, NY 04/2017 – 08/2017

- Implemented new query cancellation and monitoring SQL statements in CockroachDB, along with cancellation mechanisms for both single-node and distributed queries
- Wrote RFC design documents and achieved consensus before starting implementation

**Software Developer Intern at Amazon,** Toronto, ON 09/2016 – 12/2016

- Build a pipeline to move shipment planning audit data to AWS DynamoDB and Redshift at scale using SNS, Lambda, and Kinesis streams, from a Java service
- Made an internal website using Backbone and Flask to surface audit data and answer exactly where inbound packages are being sent, and what part of the system made that decision

**Backend Services Intern at PagerDuty,** Toronto, ON 01/2016 – 04/2016

- Optimized notification composing and batching for alert-heavy users, increasing peak incident handling and notification sending capacity by at least 10x
- Added incident grouping features to the Ruby web app, and executed related long-running MySQL migrations on core incident tables without any downtime

## Activities

- Ran beginner-oriented workshops and mentored first years on Ruby, Rails, and SQL
- Served as Research Assistant on projects in operating systems and programming languages
- Active University senator, leading initiatives on mental health and academic program changes

## Education

**Bachelor of Software Engineering at the University of Waterloo** 09/2014 – 06/2019

CGPA: 3.95 (Dean's Honours List recipient)

