

# Rafay Aleem

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## EDUCATION

### SIMON FRASER UNIVERSITY

MSC IN COMPUTER SCIENCE

Sep 2018

Graduating in Dec 2019

Burnaby, BC, Canada

### NUST

BACHELOR OF SOFTWARE  
ENGINEERING

Sep 2010 - May 2014

Islamabad, Pakistan

## SKILLS

### BIG DATA

RStudio • Jupyter • Anaconda

PyTorch • Spark • Hadoop

### PROGRAMMING

Ruby • Python • Django

JavaScript • NodeJS

### DISTRIBUTED SYSTEMS

Kafka • RabbitMQ • Kubernetes

Celery • Redis • AWS Kinesis

AWS SQS • MySQL • Azkaban

Hue • Mode • Presto

Others:

Git • kafka-python • Sarama

## COURSEWORK

### GRADUATE

Machine Learning

Statistical Learning and Prediction

Programming for Big Data

### UNDERGRADUATE

Operating Systems

Applied Parallel Computing

Network Security

Computer Networks

Database Systems

Computer Graphics

## ACTIVITIES

- Guitar player (Played at the Orpheum Theatre in June 2018)
- Trekking and Hiking (Base camp of 9th highest peak)
- Horse riding

## EXPERIENCE

### SHOPIFY | DATA ENGINEER INTERN

May 2019 - Aug 2019 | Toronto, ON, Canada

- Implemented binary parsers with custom codecs to handle data ingestion
- Implemented safeguards for downstream migration for type changes in upstream data sources
- Implemented new Datadog metrics and notifications for improved visibility
- Explored and worked on MySQL load-shedding in extractors
- Learned de-duplication techniques required to prevent duplication of same rows coming from multiple shards
- Learned tools such as Azkaban, Apache Hue, Presto, Hive and Mode

### WIIVV WEARABLES | SENIOR PLATFORM ENGINEER

Nov 2017 - Aug 2018 | Vancouver, BC, Canada

- Wrote event-driven microservices in NodeJS using RabbitMQ
- Briefly worked with Kubernetes on AWS to improve security and load handling

### DUBIZZLE OLX | SOFTWARE ENGINEER

Jan 2016 - Nov 2017 | Dubai, UAE

- Architected and migrated payment web-service to a new payment gateway through an A/B test by leveraging HAProxy sticky sessions
- Worked as a core contributor to break Dubizzle monolith into microservices using SOLID principles
- Selected as OLX Tech Ambassador for MENA region

### DUBIZZLE OLX | JUNIOR SOFTWARE ENGINEER

June 2014 - Dec 2015 | Dubai, UAE

- Worked on projects covering load balancing, load testing, caching, message bus, canary releases, asynchronous tasks, producers and consumers

## ARTICLES & BLOG POSTS

- |              |                                                            |
|--------------|------------------------------------------------------------|
| Aug 06, 2019 | An introduction to Random Forest using Tesla stock prices  |
| Apr 14, 2019 | Predicting Stable Portfolios Using Machine Learning        |
| Mar 08, 2019 | Deep Learning using BigDL                                  |
| Mar 13, 2017 | A/B Testing Our Way to a Better Payment Gateway (OLX)      |
| Feb 08, 2016 | Live MySQL Schema Changes on Amazon RDS with Percona (OLX) |

## PROJECTS

- |          |                                                             |
|----------|-------------------------------------------------------------|
| Sep 2017 | Message bus abstraction for multiple brokers (Dubizzle).    |
| Jan 2014 | Intelligent Traffic Steering at SDX. Publication submitted. |

## HACKATHONS

- |          |                                                             |
|----------|-------------------------------------------------------------|
| Nov 2012 | Mobilink Game Development Contest (runner-up)               |
| Oct 2012 | Punjab Youth Festival Game Development Competition (winner) |

## OPEN SOURCE

- |          |                                                                      |
|----------|----------------------------------------------------------------------|
| Oct 2016 | Shopify Sarama: Added user-space multi-version support for Kafka     |
| Sep 2015 | Gdx-sqlite: Cross-platform extension for database handling in Libgdx |