

# Vaibhav Singh

## Masters Student

A skilled and reliable software engineer with an interest in Software Engineering and Distributed Systems. Actively seeking a full-time position as a Site Reliability Engineer/ Production Engineer/ Software Engineer. Expected to graduate in May 2020.

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## WORK EXPERIENCE

### SDE 2

#### Oracle Corp.

06/2015 – 12/2018

##### Achievements/Tasks

- Architected and implemented XEP-215 External Service Discovery, an XMPP spec for discovering TURN/STUN servers for WebRTC traffic. The solution was deployed on a network of thousands of Samsung security cameras. 📄
- Designed a number of security and authentication features (Client Credentials Grant JSON Web Tokens (JWT), CSRF protection using one-time form tokens). Using Tsung and Jmeter, performed load tests on the features.

### Intern International

#### eBay Inc.

06/2014 – 12/2014

##### Achievements/Tasks

- Developed Automation tooling infrastructure for the Buyer Experience (BE) Tooling team at eBay.
- Designed Firefox and Chrome extensions on Selenium IDE leading to a 70% increase in the number of automated UX tests. Created a Django application to ingest test data for preprocessing and filter them based on priority.
- Products were released in-house to multiple teams at eBay and PayPal. Won the above and beyond award (and an Amazon Kindle) for the same.

## EDUCATION

### Masters in Computer Networking

#### North Carolina State University

01/2019 – Present

Raleigh, USA

##### Courses

- Distributed Systems, Operating Systems, DevOps, Internet Protocols, Design and Analysis of Algorithms, Computer Networks Security, Cloud Computing, Cloud Resiliency.
- Graduate Student Researcher at the WSPR Security Lab working on URL domain clustering to predict domain ownership similarity.

### B.E. in Electronics and Instrumentation

#### Birla Institute of Technology and Science

06/2011 – 05/2015

##### Courses

- Data Mining, Computer Networking, Linear Algebra, Image Processing, Signals and Systems

## SKILLS

Java Python Scala Django C \*nix

ElasticSearch LogStash Fluentd Kibana

Kubernetes Docker Node.js Redis Ansible

Datadog PM2 NLTK JProfiler Algorithms

OWASP Top 10 Tsung Jmeter

## PERSONAL PROJECTS

Feature Flags control using custom Kubernetes scheduler (09/2019 – Present)

- Building a tool to automatically control application Feature Flags in Redis based on resource pressure on the k8s cluster.
- Creating a custom k8s scheduler to provide resource pressure metrics to the Feature Flag tool.

Peer-to-Peer File Sharing (08/2019 – 09/2019)

- Engineered a P2P file sharing system to share RFCs as part of the course Internet Protocols.
- Spawned new peers in different GCP availability zones and tested the performance differences between client-server and P2P systems.

DevOps Infrastructure (01/2019 – 05/2019)

- Developed an end-to-end DevOps platform over Ansible for a Node.JS based health application and a Java application.
- The platform can be used to automatically deploy and run jobs on Jenkins, run static and dynamic analysis tasks and run custom code fuzzing tool to automatically detect semantic issues in JS code.
- The applications were deployed on Kubernetes to ensure failover and monitor their health using Logstash and Prometheus.

BlindSignatures-Impl (09/2018 – 10/2018)

- CLI Java implementation of Blind Signatures protocol using BouncyCastle

## ACHIEVEMENTS

NTSE Scholar (04/2008 – 05/2015)

KVPY Scholar (09/2009 – 05/2015)

## CERTIFICATION

Functional Programming Principles in Scala - Certificate ID FTASVGR4NQLZ  
Full Professional Proficiency

Functional Programming Design in Scala - Certificate ID 9S46X3Z23NF9  
Full Professional Proficiency