

# Hemendu Roy

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## SUMMARY

Computer Science graduate student with 2+ years of experience in software development, object-oriented programming and microservices deployed in the cloud.

## EDUCATION

### Candidate for Master of Science in Computer Science

Expected May 2023

Arizona State University, Tempe, AZ

3.89 GPA

*Software Security, Mobile Computing, Cloud Computing, Advanced Network Security, Distributed Database Systems*

### Bachelor of Engineering in Electronics & Communication

2015 – 2019

R.V College of Engineering, India

3.84 GPA

*Applied Mathematics, Advanced Data Structures, Java, Computer Communication Networks*

## EXPERIENCE

### SEFCOM Laboratory at ASU, United States: Cybersecurity Research Assistant

10/2021 - Present

Integrating Open Source 5G implementations such as free5gmano, free5gc and UERANSIM together and subsequently scanning for security vulnerabilities.

### HPE Aruba, India: Software Engineer

09/2019 - 05/2021

- Developed predictive Network Insights by consuming live telemetry data from millions of Access Points using Scala.
- Developed scripts for Test Automation, Application Deployment and Data analysis using Spark and Python.
- Recognized with **three “Aruba Recognition Awards”** for outstanding performance

### HPE Aruba, India: Cloud Engineer Intern

01/2019 - 07/2019

Implemented a Hadoop NameNode High Availability Architecture to ensure seamless failover of several applications scheduled in YARN and Oozie.

## PROJECTS

### Hand Gesture Recognition

2021

Designed a mobile app that records and sends video footage to a server that employs a CNN model to classify gestures.

- Developed the app using Android API 28 and Java
- Used Flask to create an API
- Employed cosine similarity to perform gesture recognition using a Convolutional Neural Network model

### BrainNet

2021

Demonstrated liveness detection of brain signals and compared performance parameters of several supervised and unsupervised Machine Learning models such as Support Vector Machines, Random Forest and Multi-Layer Perceptron Classifiers

### Scalable Facial Recognition System

2022

Developed a multi-tiered Facial recognition system

- Used Flask and Gunicorn to create a web server
- Implemented the backend with autoscaling using Python
- Used Amazon S3 to store data and Amazon SQS to relay messages

### Open-source contributions

[triangles](#) – A python module that calculates triangle attributes using the Law of cosines and the Law of sines.

## TECHNICAL SKILLS

**Languages:** Java, Python, C/C++, Bash, Scala

**Technologies:** Amazon EC2, Azure, Google Cloud, SQS, Kubernetes, Docker, Hadoop, Cassandra, PostgreSQL, Oozie, Kafka, Ansible, Android Studio, Jenkins, Datadog, Grafana, VMWare, KVM, numpy, pandas, scikit-learn, ghidra, wireshark, Git

## AWARDS

The Math Company Triathlon Winner (2018): Programming, Business Acumen and Mental Aptitude competition for undergraduate students to compete for a placement opportunity.