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 real-time 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
- Used 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
Apache Sedona – Implemented PostGIS spatial geometry functions in Scala, Python and Java

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.