

SAHIL RANADIVE

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Education

Georgia Institute of Technology

Aug. 2022 – May 2024

Master of Science in Computer Science

Birla Institute of Technology and Science, Pilani(India)

Aug. 2016 – May 2020

Bachelor of Engineering in Computer Science

GPA: 8.1/10.0

Relevant Coursework

- **Georgia Tech:** Advanced Operating Systems, Computer Networks, Human in the Loop Data Analytics
- **BITS, Pilani:** Cloud Computing, Data Structures and Algorithms, Database Systems, Neural Nets and Fuzzy Logic

Experience

AppDynamics(Part of Cisco)

Jul. 2020 – Jul. 2022

Software Engineer

Bangalore, India

- Worked on designing the backend-compatible schema for the next-gen **OTel compliant database monitoring agent**
- Developed PoCs to measure OTel pipeline's compatibility with the AppDynamics backend using the MySQL receiver
- **Extended the MSSQL and Oracle OTel receivers** to support additional metrics and topology auto discovery
- Designed a Golang based OTel collector for monitoring Kubernetes workloads; Optimized it to leave minimum footprint on customer clusters while **improving scaling performance by 9 times**
- Developed several backend features for the legacy database agent including a **collector for PostgreSQL** databases

PayPal

Jan. 2020 – Jun. 2020

Software Developer Intern

Bangalore, India

- Worked full-stack on developing an organization-wide web application to query and retrieve Merchant Billing transactions easily and efficiently using a Java backend and an Angular frontend
- Successfully optimized a model to predict the PayPal product to be pitched to Merchants while on-boarding using a denoising Autoencoder and a random forest of Decision Trees

Samsung Research Institute

May 2019 – Jul. 2019

Software Developer Intern

Noida, India

- Automated the triage process for customer issues using regex matching and text classification via a Python application with BeautifulSoup; Achieved **resolution for more than 40% of incoming issues** without intervention from customer support engineers
- Explored GPS based mobile tracking and battery optimization in powered off devices as an anti-theft solution

Projects

Detection and Prevention of DDoS Attacks using Darknet Data

Aug. 2019 – Dec. 2019

- Analyzed large-scale Internet Background Radiation (IBR) data from CAIDA's network data using CORSARO
- Developed a model to **recognize DDoS attacks** caused by a botnet of compromised victims or using IP spoofing
- Successfully built and optimized variants of K-Means and EM Clustering to **correctly identify over 95% attack patterns**

Efficient Task Distribution and Scheduling in Clustered Environments

Jan. 2019 – Jun. 2019

- Developed a load balancing algorithm for priority-based scheduling of a continuous stream of jobs on cluster systems
- Leveraged resource consumption metadata of jobs to classify them into categories; Assigned each category to a sub-cluster for efficient batch processing while dynamically migrating waiting jobs to optimize the turn around time
- Achieved improved performance compared against existing load balancing algorithms like the Round Robin approach
- This work was **published as a short paper and was presented at IEEE CCNC 2020 held in Las Vegas**

A Systematic Survey of Blockchain Application in Smart Grid

Aug. 2018 – Dec. 2018

- Analyzed and compared the Grid Monitoring, PriWatt and PETCON approaches for Energy Trading on Smart Grids
- Explored the Proof of Work, Proof of Stakes and Proof of Activity consensus algorithms for transaction verification

Technical Skills

Languages: C++, Java, C, Go, Python, HTML/CSS, JavaScript, SQL, L^AT_EX

Tools and Frameworks: Kubernetes, Docker, OpenTelemetry, SqlCommenter, OracleDB, MySQL, React, Angular, Git

Leadership / Extracurricular

- **Leadership:** 1. Head Teaching Assistant for the Neural Nets and Fuzzy Logic course(150 students) at BITS, Pilani
2. Co-ordinator for Guest Lecture Series at BITS, Pilani
- **Achievements:** KVPY Scholar | 99.26th percentile in JEE Mains & 98.23rd percentile in JEE Advance 2016