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RISHAB KATTA

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EDUCATION

Rochester Institute of Technology	Rochester, NY	Aug 2018 – Dec 2020 (Expected)
<ul style="list-style-type: none">• M.S. in Computer Science, GPA: 3.81• Graduate Coursework: Data Structures and Algorithms, Foundations of Intelligent Systems, Advanced Object Oriented Programming Concepts, Machine Learning and Neural Networks, Big Data Analytics, Distributed Systems		
Osmania University	Hyderabad, India	Aug 2012 – May 2016
<ul style="list-style-type: none">• Bachelor of Engineering in Computer Engineering, First Class Graduate (Honors)		

WORK EXPERIENCE

Graduate Student Researcher	SpiRIT Lab, Rochester, NY	Apr 2020 – Present
<ul style="list-style-type: none">• Research on Homomorphic Encryption and SparkFHE Platform. Incorporating homomorphic encryption into a highly efficient data analytics platform to support secure data analytics and machine learning on encrypted data in the cloud.		
Software Engineering Fellow	Aeris Communications Inc, SF, CA	Aug 2019 – Jan 2020
<ul style="list-style-type: none">• Ava is an intelligent assistant which understands natural language and responds to text and voice commands.• Ava helps Aeris customers to request information about their IoT devices, and perform troubleshooting in an efficient and streamlined fashion. It uses Role-Based Access, where each user can only access devices under his control.• I designed, built and deployed the Aeris Virtual Assistant(AVA) all by myself with the help of my mentor. Tech stack used includes Javascript, Node.js, NLP, Dialogflow, React, Hapi, SQL, Docker for containerization, Google Cloud Platform.• The second project is a research project. The research is on FOTA (Firmware Over The Air) Transfer over LTE-M Network for IoT devices. I wrote a paper based on our conclusions from the project and submitted it to the Elsevier Journal.		
Software Engineer	Infosys, Bangalore, India	Jun 2016 - Jun 2018
<ul style="list-style-type: none">• Worked on a Java-based web application(Spring MVC) for managing check payments. Built a service that matches and balances account data, checking for errors and possible fraud, and a service that generates reconciled statements.• Developed a service for Data Masking to encrypt/hide sensitive production data for the client, a US-Based Bank.• Automated Report generation about flow and timings of batch execution of jobs, saving 50 man-hours of work/week.• Experience with API designs, database integrations, building CI/CD Pipelines, code reviews and working with XML/SOAP.		

LANGUAGES AND TECHNOLOGIES

- **Languages:** Java, Python, C++, Javascript, Bash, SQL(Postgres, MySQL, OracleDB), NoSQL(MongoDB, Neo4j), HTML, CSS.
- **Frameworks & Tools:** AWS, GCP, Spring, Hibernate, Node.js, Elasticsearch, Kibana, Spark, Kafka, Docker, Kubernetes.
- **Libraries:** React and Redux, Pandas, Numpy, Scipy, Scikit-Learn, Keras, Tensorflow, NLTK, OpenCV.
- **OS:** Linux(primarily), Unix-based, Windows.

PROJECTS

- **Kademlia Distributed Hashtable** (*Java, Remote Procedure Call, Socket Programming, Docker, Docker-compose*): Developed a State-of-the-art P2P Kademlia Distributed Hashtable which uses XOR metric for File Storage and Retrieval.
- **Publisher/Subscriber System**(*Java, Remote Method Invocation, Docker*): Developed a Highly Scalable Pub/Sub System with a beautiful Command Line Interface using Java. Tested on 100+ Pubs/Subs making requests simultaneously.
- **Diabetic Retinopathy Detection**(*Python, Tensorflow, Keras, Scikit-learn, OpenCV*): Created an automated grading system for DR using Inceptionv3 CNN. Experimented with image processing techniques like CLAHE. AUC achieved: 0.94
- **Game Playing Agent for Atari Berzerk**(*Python, PIL, OpenAI Gym, Numpy*): Developed an Intelligent Agent for Playing Atari Berzerk using Adversarial Search Algorithm. The Agent achieved a high score of 10000+ on the game.
- **Data Warehousing on IMDb Data**(*Python, PostgreSQL, MongoDB, ETL*): Consolidated data from various sources using ETL Strategies to a central location and performed queries on the integrated data.
- **Stock Market Performance Prediction** (*Python, PostgreSQL, MongoDB*): Performed Itemset Mining and Association Rule Mining on a Large Stocks Dataset. Discovered insights on how stocks of one industry influence others.
- **Yelpcamp(Personal)**(*Node.js, Express, MongoDB and REST API*) Yelpcamp is a campgrounds sharing web app.

CERTIFICATIONS

- AWS Certified Solutions Architect Associate.
- Machine Learning and Deep Learning by Kirill Eremenko.(Udemy)