HIMA BINDU KROVVIDI

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EDUCATION

Rochester Institute of Technology **Expected: Aug 2023**
Master of Science - Computer Science
Relevant Coursework: Distributed Systems, Cloud Computing, Computer Networks, Big Data, Advanced Object - Oriented Programming, Foundations of Algorithms, Foundations of Artificial Intelligence, Foundations of Cryptography

Jawaharlal Nehru Technological University **Aug 2017 – Jun 2021**
Bachelor of Engineering – Computer Science **GPA: 7.9/10**

TECHNICAL SKILLS

Languages: Java, Socket Programming, Python, Haskell, SQL, JavaScript, HTML, CSS, PHP
Tools: Eclipse, VS Code, Jupyter Notebook, IntelliJ IDE, Google Colab, Android Studio, Git
Databases and Data – frames, Libraries: Pandas, NumPy, Matplotlib
Operating Systems: Windows, MacOS, Linux, Ubuntu, Unix
Technologies: FlaskAPI, Docker, AWS, Kubernetes, BouncyCastle

EXPERIENCE

Secure Data Distribution for Cloud Servers: [Java, Digital Signature, Network Security, BouncyCastle] **May 2023 – Present**

- Developed a novel data distribution ensuring even if data is exposed on a cloud server, attackers cannot retrieve the entire dataset, enhancing security and privacy in cloud environments.
- Led the design and implementation of a secure storage framework based on fog computing, incorporating advanced encryption algorithms such as AES and integrating Reed Solomon Code
- Conducted thorough testing and validation to achieve robust data integrity and confidentiality, and successfully presented the project findings to a technical audience, demonstrating strong problem-solving and analytical skills.

Techwave Consulting: Project Intern **Nov 2020 – Aug 2021**

Cloud Native Monitoring Application: [Flask, Docker, AWS, Kubernetes,Python]

- Led a team of 4 for deploying a Cpu and memory usage application with FlaskAPI through Agile methodology.
- Generated an application and containerized it through docker and pushed image on AWS-ECR and created EKS nodes. Successfully created Kubernetes deployments and service using python.
- Distributed, assigned and facilitated tasks throughout the project, and cut down the given timeline of the project by 30%.

PROJECTS

Jenkins CI/CD Pipeline: [Jenkins, CI/CD,SonarQube, Docker, Github Webhooks on AWS] **Jan 2023 – Mar 2023**

- Created a website and pushed the code through Github and pushed it into Jenkins. The pulled code was tested on SonarCube to scan bugs and vulnerabilities of the code. Added rules for scanning the code and was found successful.
- Deployed the application on Docker by creating Docker images, with the help of the environment AWS-EC2 for containing the Jenkins, SonarQube and Docker.

Path finder using A* algorithm: [Python, OpenCV] **Sep 2022 – Oct 2022**

- Constructed the fastest path finder for a park map image (385 x 500 pixels) consisting of 10 different terrains using the A* algorithm.
- Formulated the cost function of the algorithm by deciding the heuristic function based on the speed of a person on the terrain and the time required to cover the distance between two points.

Lunar Rovers – Design a Protocol: [Java, Docker, Socket Programming, Multi-Threading] **Mar 2022 – Apr 2022**

- Designed a protocol which finds the shortest path and most efficient distance to send 2 packets from one node to another.
- Executed server and client parity check to correct errors and added sequence numbers to reorder the packets arrived.

Lunar Rovers Simulated by Multicast IP: [Java, Docker, Socket Programming, Networks] **Feb 2022 – Mar 2022**

- Implemented a distance-vector routing protocol (RIPv2) to exchange routing information, and calculate the shortest distance from one to another, along with 8 other specifications like master rover configuration.
- Integrated 1) active RIP as a router, 2) handling incoming routing messages, 3) CIDR, 4) route message broadcast.

Analyzing Captured Packets: [Java] **Jan 2022 – Feb 2022**

- Computed a program which extracts and displays headers of packets of type TCP, UDP or ICMP captured in a 10 second time-frame.
- Displays Ethernet header fields of the frame through extraction of the Hexdump and the IP Header and the packet encapsulated.

Image Identification using TCP: [Java, Socket Programming] **Oct 2021 – Nov 2021**

- Created a Java-based “guessing image” game for 2 players connected to separate servers, using bidirectional TCP connection to convey move results.

ACHIEVEMENTS & CONTRIBUTIONS

International Student Advisor helping them navigate the transition to their new academic and cultural environment, ensuring a smooth and successful integration into the university community.
Merit Scholarship – RIT: Received 40% scholarship for Master of Science Program.
Volunteer at Street Cause India: Raised funds and helped delivering groceries and meals during COVID, introduced laptops and the internet.
KMIT’s Hackathon: Won prizes and ranked among the top 10 students for over 10 weeks in weekly hackathons held by the college.