SOFIA PANUGANTI

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EDUCATION

University of Maryland, Baltimore County   Baltimore, MD
Master of Science, Computer Science   August 2023
- GPA : 3.76/4.0
- Courses - Advanced Operating Systems, Design and Analysis of Algorithms, Advanced Computer Architecture, Data Visualization, Malware Analysis, Brain Computer Interfaces

Jawaharlal Nehru Technological University   Hyderabad, India
Bachelor of Technology, Computer Science and Engineering   August 2017 - June 2021
- GPA : 3.82/4.0
- Courses - Operating Systems, Data Structures and Algorithms, Computer Networks, Computational Mathematics, Web Service and Cloud Computing, Software Engineering, Big Data Analytics

SKILLS

- Programming Languages : Python, Java, JavaScript, HTML, CSS. Working Proficiency with C++
- Frameworks and Technologies : ReactJS, NodeJS, ExpressJS, Flask, Bootstrap, Django
- Databases : SQL, Mongo DB, Dynamo DB, Aurora MYSQL, Amazon RDS, Amazon S3
- Cloud and DevOps : Amazon ECS Fargate, EC2, Step functions, Lambda, Data pipelines, SQS, SNS, VPC, IAM, Jenkins, Terraform

EXPERIENCE

University of Maryland, Baltimore County   Baltimore, MD
Graduate Assistant   January 2022 - May 2023
- Leveraged expertise in VirtualBox, Linux, Windows, and malware analysis tools like IDA Pro and Wireshark to deliver in-depth analysis and evaluation of coursework, benefiting 200 students and enhancing their understanding of cybersecurity principles
- Provided academic support and personalized guidance to a cohort of 60 undergraduate students, meticulously grading assignments and mentoring with coding projects, promoting student success

Aerial Topographic Services Pvt Ltd   Hyderabad, India
Software Development Engineer   January 2019 - May 2021
- Spearheaded the implementation of a microservices architecture using Docker and Kubernetes for the aerial survey data processing application, resulting in a 40% improvement in system scalability and a 25% reduction in deployment failures
- Developed RESTful APIs with Node.js and Express.js, facilitating seamless communication between the frontend mapping interface and the backend data processing system, leading to a 30% increase in data retrieval speed
- Integrated AWS services (S3, Lambda, DynamoDB) to establish a serverless data pipeline for aerial imagery processing, slashing infrastructure costs by 50% and accelerating data processing times by 20%
- Engineered a responsive web-based mapping application with React.js, enhancing user experience and increasing user engagement by 35% compared to the previous mapping tool
- Conducted rigorous performance optimization tasks, including database indexing and code refactoring, resulting in a 40% improvement in application responsiveness and a 20% reduction in server load during peak usage periods

PROJECTS

Image Texture Synthesis using Graphcut   May 2022
- Implemented an advanced image texture synthesis project leveraging Graphcut techniques in Python, showcasing adept conceptualization, algorithmic design, and implementation skills
- Applied the Ford-Fulkerson algorithm to meticulously stitch patch regions from sample images, demonstrating proficiency in algorithm implementation and optimization for achieving high-quality image synthesis

Distributed System with Multicasting and Locking   December 2021
- Successfully implemented Berkeley's algorithm for clock synchronization, causal-ordered multicasting with vector clocks and distributed locking algorithms to protect a shared file in a distributed system
- Developed precise communication and synchronization between processes in a distributed system using C++ on Linux, employing multi-threading, socket programming, and file I/O operations

LEADERSHIP

Hyderabad Youth Assembly, Vice Chairperson   December 2018 - September 2019
- Led and managed a team of 25 to successfully organize and execute 8 events towards United Nations SDG goals