Abinaya Odeti

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Education

University of North Carolina at Charlotte — Charlotte, NC
Master of Science in Computer Science, GPA:3.9/4 — Jan 2024 – May 2025

Technical Skills

Languages/Frameworks: Python, Java, C, C#, JavaScript, C++, Perl , Angular, SQL, MongoDB ,HTML/CSS, SVG ,Flask, Selenium, React.js,Express.js, Angular, Django, Node.js , .NET.
Tools/Technologies: Git, AWS, Azure, Linux ,Docker, Postman, Jenkins, Jira, APIs, D3.
Data Science/ML: Regression, Classification, NLP, Neural Networks, TensorFlow, OpenCV, Tableau.
Networking and Storage Technologies:TCP/IP, LAN/WAN, Routing, Switching , SAN , NAS ,Block storage, 3PAR , Nimble storage , storage concepts, Cache Accelerated Sequential Layout (CASL).

Experience

Systems/Software Engineer I, Nimble Storage — Aug 2022 – Dec 2023
Hewlett Packard Enterprise , India

- Developed scalable solutions within the **Nimble product** that improved data retrieval times by **30%**, resulting in increased system responsiveness while ensuring integrity of both block and object storage operations.
- Implemented web server optimizations, including reducing CPU/RAM usage and improving system responsiveness for enterprise-level applications.
- Contributed to storage system consolidation by merging storage units, optimizing resource allocation, and tuning configurations to improve data access speed and overall system performance.
- Engineered and implemented robust attribute caching systems utilizing **C++** and **Perl**, achieving a increase in data retrieval speeds while enhancing overall system responsiveness across the Nimble storage platform.
- Enhanced Volscan to display detailed block data and established communication protocols between arrays, ensuring secure volume synchronization post-recovery.
- Exhibited exceptional problem-solving abilities by managing and resolving critical customer escalations, debugging, and fixing issues promptly, while maintaining 24/7 availability to ensure swift and effective solutions.

Research and Development intern — Jan 2022 - Jul 2022
Hewlett Packard Enterprise , India

- Research and Developer Intern at AOE in Bangalore.Gained a comprehensive understanding of **SAN,NAS ,Block storage, File storage , LAN/WAN, Routing , Switching**,distributed storage architectures focused on System Test for **HPE 3PAR storage** and various storage protocols.
- Developed parallel features for the "Smart Template Library Enhancement" using **Python** and gained hands-on experience with Test Automation Frameworks.

Projects

Personal Budget Allocation Website | React, Angular, JavaScript, MySQL, Node.js, Express.js, D3.js, HTML, CSS -Git

- Engineered a web-based budget application using **React** and **JavaScript** with a **MySQL** backend, enhancing accuracy in budget allocation and monthly expense tracking. Built server-side logic with **Node.js** and **Express.js**, and incorporated visualizations like **pie charts** and **bar charts** operating with **D3.js**. Ensured secure user authentication.

Interactive Flight Delay Visualization Application | Tableau, javascript, D3 ,HTML, CSS -Git

- Created interactive web app using **D3.js** to analyze US flight delay data from 2011-2020.Employed data-driven storytelling to uncover delay causes, airport hotspots, and relationships between delay types.
- Developed linked visualizations to compare on-time/canceled flights, weather versus carrier delays, and identify delay causes,and relationships between delay types through data-driven storytelling.

Classification of Fragile States Index and Action Rule Generation | WEKA, LISP-Miner, Python.

- Classified countries into Fragile States Index categories using socio-economic, political, and environmental data.Preprocessed and engineered features to enhance model performance.
- Achieved high accuracy and actionable insights through classification and rule mining.

Detection of Non-Helmet Rider using YOLO and CNN | OpenCV, TensorFlow, Keras, NumPy, Matplotlib.

- Developed helmet detection system for motorcyclists using improved **YOLOv2/YOLOv3** models. Utilized a three-level deep learning approach to detect persons, motorcycles, helmets, and license plates from video, achieving a high accuracy of **95%** in real-time performance.
- Published in Journal of Applied Science and Computations.

Certifications

- Problem Solving Through Programming in C, in NPTEL platform , Completed “Introduction to Programming Using Python, in Udemy , Micro Certifications in RDBMS, Java, Web development, C, in Communication skills in Cognizant Digital Nurture program , participated in Workshops on Robotics and Cyber Security conducted by JNTUH.