Deepanshu Chalia

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EDUCATION

Southern Methodist University Dallas, TX
Master of Science in Computer Engineering Aug. 2022 – May 2024
Relevant Courses: Operating Sys., Machine Learning, Database Management, Computer Vision, Algorithm Engineering
Awards: Khotnazad Graduate Scholarship

Punjab Engineering College Punjab, India
Bachelor of Technology in Electrical Engineering Aug. 2017 – June 2021
Leadership: PECFEST President

TECHNICAL SKILLS

Software Development: Python, Java, C/C++, SQL, JavaScript, TypeScript, HTML/CSS, Bootstrap, Angular, ReactJS, Node.js, Flask, Express, Axios, RestAPI, OpenCV, Postman, Django
DevOps & Cloud Infrastructure: AWS, Kubernetes, Docker, Azure, LangChain, CI/CD
Databases & Data Management: MongoDB, MySQL, PostgreSQL, Talend
Version Control & Development Workflow: Gitlab, VS Code, Fly.IO, Linux

EXPERIENCE

Southern Methodist University

Teaching Assistant Dallas, TX
Microcontroller Interface & Architecture; Skills used: ARM, keil vision Jan 2024 – April 2024
- Developed engaging labs to equip 13 students with strong assembly and high-level language skills for embedded sys
- Implemented real-time OS & bus interfaces for ARM STM32F107 Cortex-M3 board, covering memory, peripherals, and debugging leading to a 10% project outcome improvement

Digital Systems Design; Skills used: HDL, embedded systems Aug 2023 – Dec 2023
- Deepened course comprehension by strategically aiding in the usage of HDLs and automated synthesis tools
- Reduced troubleshooting errors by 15% and boosted student satisfaction with targeted lab support for 13 students

Southern Methodist University Dallas, TX
Graduate Research Assistant; Skills used: Java, JavaScript, Angular, LLM Aug 2023 – Dec 2023
- Designed and developed visualization dashboards using Java and Angular to demonstrate applications of LLMs.
- Enhanced task efficiency and UX traffic by 10% through the implementation of a ChatGPT-based GUI for an agent-based framework.

Regional Transmission Organization (RTO), India
Energy Systems Engineer; Skills used: PLC, SCADA Jan 2020 – April 2020
- Led the "Smart Transformer" project, adding PLC and SCADA for 15% efficiency gain and 10% peak load drop
- Minimized energy waste by 7% using embedded software, optimizing SCADA for enhanced efficiency

PROJECTS

Habit Tracker Jan 2024 – Present
- Enabled daily habit tracking with integrated client-server interaction and secure authentication for over 1,000 users
- Implemented MERN and axios to create a responsive front-end and back-end
- Improved backend reliability by 20% with Postman testing and successfully deployed the app on Render.Io

3D Object Detection Nov 2023 – Dec 2023
- Deployed projective image processing for precise dimensioning of a box moving on a conveyor belt
- Corrected image distortions with camera parameters and distinguished surfaces using histogram and peak detection achieving a 15% improvement in object detection precision

Sports League Database Nov 2022 – Dec 2022
- Engineered a web app for sports league management, supporting 500+ scheduled games and real-time updates
- Incorporated Python and Django enhancing operational efficiency by 30%

INTERESTS

Hiking, Strength training, Bhangra(Punjabi Folk dance), Volleyball, Formula1, Cricket