Nidhi Ravi

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PROFESSIONAL SUMMARY

Passionate and detail-oriented Computer Science and Engineering student with hands-on experience in web development, coupled with a strong foundation in Machine Learning. I thrive on building intuitive, responsive applications and am dedicated to leveraging my skills to solve complex problems. My goal is to contribute innovative solutions at the intersection of technology and data while continuously expanding my expertise in both development and machine learning domains.

TECHNICAL SKILLS

Programming Languages and Frameworks: Python, HTML, CSS, Javascript (React), C, MATLAB, Java, Node.js
Data Structures and Algorithms: Proficient in Data Structures and Algorithms
Database Management: PostgreSQL, MySQL, MongoDB
Operating Systems and Scripting: Linux (Shell Programming)
Developer Tools: Jupyter Notebook, GitHub, Microsoft Office (Advanced Excel, Word)
Strong problem-solving and analytical skills.

CERTIFICATIONS

- Front-End and Web Development by IBM
- Introduction to Android Mobile Application Development by Meta
- Exploratory Data Analysis for Machine Learning by IBM

EDUCATION

People Education Society (PES) University, Bangalore, India   September 2022 - Present
Bachelor of Science, Computer Science and Engineering (Sophomore) |
Came in top 15 and won cash prize in Hackathons, First place in Green Computing Ideathon

Sri Chaitanya   June 2018- March 2022
High School l – Maths, Physics, Chemistry, Computer Science
Percentage: 95.67%   College Topper-Class of 2022

CO-CURRICULAR EXPERIENCE

AURA-University AIML Club Member, PES University, Bangalore, India   January 2024 – Present
Participated in the organization and execution of club meetings, workshops, hackathons, and events focused on AI and ML technologies

NEXUS-University Coding Club Member, PES University, Bangalore, India   March 2024 – Present
Participated in the organization and execution of club meetings, workshops, hackathons, and events focused on coding and problem-solving skills

WORK EXPERIENCE

Software Development Intern, HUBS, Bangalore, India   June 2024 – August 2024
- Designed and prototyped user interfaces using Figma, contributing to the overall user experience strategy for the mobile application
- Developed cross-platform mobile applications using Flutter and React Native, ensuring consistent functionality across iOS and Android platforms
- Implemented geofencing technology and integrated APIs to enable location-based features critical to the application's core functionality

PROJECTS

Skill Exchange Platform
- Developed a full-stack web application to connect students and mentors for project collaboration and skill-sharing within the academic community.
- Built the frontend using React.js, enabling skill-based project discovery, dynamic navigation, and responsive design.
- Developed the backend using Flask (Python) and MySQL, implementing RESTful APIs, secure login/signup with bcrypt, and role-based user access.
- Designed and normalized a relational database schema with stored procedures, triggers, and views to handle project management, collaboration, and mentorship features.
- Implemented user profile management, resume and certification upload, and mentor-matching functionalities to enhance learner engagement.

Book Review and Catalogue
- Developed a full-stack web application utilizing HTML, JavaScript, React, and Tailwind CSS, enabling users to discover, review, and catalogue books in a user-friendly and visually appealing interface.
- Architected a backend with MongoDB for efficient management and retrieval of vast book libraries, supporting real-time updates and personalized user data.
- Enhanced user engagement through dynamic JavaScript functionality for seamless page interactions, intuitive navigation, and a responsive design that adapts to various devices.

Stock Portfolio Management System
- Developed a Spring Boot web application that enables users to manage their stock portfolios with features like secure authentication, transaction processing, and real-time valuation
- Built functionalities for adding, updating, and deleting stocks; executing buy/sell operations; and analyzing portfolio performance and risk metrics.
- Structured the project using MVC architecture with Spring Security, Spring Data JPA, and Thymeleaf for dynamic server-side rendering, styled using Bootstrap 5.
- Incorporated design patterns such as Singleton (configuration), Factory (transaction creation), Observer (stock price updates), and Strategy (portfolio analysis) ensure clean and scalable code organization.

Car Parts Classifier using CNN
- Developed a Convolutional Neural Network (CNN) in PyTorch to classify different car parts from images, achieving ~95% test accuracy and ~76% training accuracy.
- Improved model generalization and training efficiency by incorporating data augmentation, batch normalization, and the Adam optimizer.
- Utilized Google Colab with CUDA for GPU-accelerated training, and handled image preprocessing using torch vision, PIL and NumPy.

Path Finding Algorithm Visualizer
- Designed and developed an interactive web application to visualize path finding algorithms such as Dijkstra's, Breadth-First Search (BFS), and Depth-First Search (DFS), providing an educational tool for users to understand algorithm behavior
- Implemented a dynamic, responsive user interface using JavaScript, HTML, and CSS, allowing users to easily set start and end points, place obstacles, and adjust the visualization speed to customize their learning experience
- Optimized the rendering of algorithm steps to ensure smooth and real-time visualization, enhancing user engagement and comprehension through clear visual feedback.