HARSHIL PATEL

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OBJECTIVE

Bachelors Of Information Technology Student looking for summer internships.

EDUCATION

Bachelor of Information Technology, CGPA - 8.7, Vellore Institute Of Technology 2026

SKILLS

Technical Skills	Java, C, C++, HTML, Node.JS, AngularJS, React, Python, CSS, 8051 Assembly Language, AI, ML, Flask, Express.JS
SDK	Android Studio, Flutter, Unity Engine, Arduino IDE, Cisco Packet Tracer
Designing Skills	Figma, Star UML, Canva, Microsoft Office
Database Management Skills	SQL Plus, MongoDB, Firebase, MS Excel

EXPERIENCE

App Developer Internship Aug 2023 - Dec 2023
Flixdin *Vellore, Tamil Nadu*

- Helped develop various software architectures.
- Gained hands-on experience in designing and implementing user-friendly interfaces
- Actively contributed to code reviews, provided feedback, and made necessary improvements
- Integrated various API's and SQL to create a fully functional user friendly mobile application.

PROJECTS

Fall Detection IoT System. Developed an IoT-based fall detection system utilizing a NodeMCU microcontroller and an accelerometer sensor to monitor sudden movements and detect potential falls. Integrated real-time notifications with the Blynk app to alert users of detected falls, ensuring timely response. Integrated GPS functionality to capture and transmit the precise location of the fall, enhancing situational awareness for emergency responders. Emphasized system reliability and accuracy through algorithm tuning to minimize false positives and false negatives.

Task Management Website. Developed a full-featured task management application using the MERN stack (MongoDB, Express.js, React.js, Node.js). Implemented user authentication, task CRUD operations, and real-time updates using Web Sockets. Designed a responsive and intuitive user interface with Material-eUI and CSS Grid. Integrated RESTful APIs for seamless data interaction between frontend and backend.

Plant Recognition AI model. Developed a deep learning-based plant recognition model capable of identifying 1,058 distinct plant species with high accuracy. Leveraged a substantial dataset of 150,000 images, implementing advanced image pre-processing and augmentation techniques to optimize model performance. Employed convolutional neural networks (CNNs) for feature extraction, with rigorous training and validation to achieve precise species classification. This model showcases expertise in the handling of large-scale datasets, modeling training, and fine-tuning for real-world biodiversity applications, contributing to efficient plant identification and supporting botanical research and conservation efforts.

Energy Consumption Prediction using LSTM Neural Networks. Designed and implemented a time series prediction model to forecast electricity consumption in Finland using an LSTM-based deep learning approach. Conducted extensive data preprocessing, including feature extraction, normalization, and resampling, to optimize model performance. Engineered insightful visualizations of historical energy consumption trends using Python libraries (Matplotlib, Seaborn) for exploratory data analysis. Built and trained an LSTM model with multiple layers and dropout regularization to reduce overfitting, achieving accurate consumption predictions for training, validation, and

test datasets. The performance of the model was evaluated using RMSE and other metrics, the results were visualized, and the model was extended for future consumption forecasting. Demonstrated expertise in handling large datasets, neural network design, and predictive analytics for real-world applications.

ACHIEVEMENTS

- Developed a business model to facilitate the movement of raw inputs to a production center to make biodegradable sanitary napkins from agro-waste. Secured the 2nd position at E-Summit'24, the flagship event by E-Cell, VIT from a cohort of 120+ teams.
- Secured the 2nd Position at ManuPitch 360, a business model development competition, held during graVITas, the international flagship technical fest at VIT, Vellore, from amongst 75+ teams.
- Top 20 AIR Holder in multiple International Olympiads, including NASO AIR1. (from 2015-2020)

LEADERSHIP

- Overlooked the management of several Technical Hackathons conducted by the IEEE-TEMS-VIT student chapter.
- Led teams through prelims and elimination rounds in competitions including thr Smart India Hackathon, E-Summit VIT 2024, and BOLT 2.0.