JEEVAN B A

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Education

Vellore Institute of Technology, Vellore — July 2021 - May 2025
B.Tech in Computer Science and Engineering — *CGPA - 8.98*

Narayana Olympiad School, Bangalore — Jun 2019 - May 2021
Higher Secondary School — *Percentage - 87.2%*

Narayana Olympiad School, Bangalore — Jun 2018 - May 2019
Secondary School — *Percentage - 86.6%*

Internships

Rashtriya Ispat Nigam Limited (Vizag Steel Plant) — September 2023 - October 2023
Project Trainee — *Visakhapatnam*

- Developed a lead time prediction model using machine learning to estimate delivery dates for orders in the Tenders & Procurement Division.
- Analyzed 25 years of historical data and implemented a Decision Tree model in Python to improve forecasting accuracy.
- Optimized procurement timelines by identifying key factors influencing lead time, enhancing decision-making efficiency.

ETHNUS — August 2023 - December 2023
Project Intern — *Remote*

- Developed a full-stack Pet Lost and Found Platform using the MERN stack, streamlining the process of reuniting lost pets with their owners.
- Implemented robust CRUD operations, secure user authentication, and a dynamic, responsive UI using React.js.
- Integrated real-time updates with WebSocket technology and engineered a matching algorithm to efficiently connect lost and found pet records.

Projects

Leveraging Lattice-Based Cryptography for Enhanced Security in Blockchain-Enabled CBDCs and Cross Border Payments | *Python, Blockchain, Quantum-Resistant Cryptography, Ethereum Sepolia Testnet*

- Implemented lattice-based cryptographic techniques to enhance the security of cross-border payments and Central Bank Digital Currencies (CBDCs).
- Developed a quantum-resistant blockchain framework integrating Learning With Errors (LWE), Ring-LWE, and Fully Homomorphic Encryption (FHE).
- Tested the system on the Ethereum Sepolia Testnet via Infura, ensuring scalability, security, and real-time blockchain transaction validation.

Integrating GDELT News Sentiment and NSE EOD Data for Stock Price Prediction | *Python, Pandas, NumPy, Scikit-Learn, XGBoost, LightGBM, CatBoost, TensorFlow, Keras, Neural Networks*

- Collected and preprocessed stock data from NSE daily reports, applying normalization to adjust for corporate actions such as splits, bonuses and rights, ensuring robust data accuracy.
- Enhanced model inputs by performing sentiment analysis on global news data from GDELT using NLTK, incorporating sentiment scores to reflect market mood influences on stock movements.
- Engineered and trained sophisticated predictive models including Random Forest, gradient boosting with XGBoost and LightGBM, and deep learning algorithms using TensorFlow for neural network architectures.
- Calculated financial returns from the models to assess economic viability and implemented the system for real-time stock price forecasting, providing actionable insights for investors.

Deep Learning-Based Dementia Detection Using Neuroimaging | *Python, TensorFlow, Keras, ResNet50*

- Engineered a deep learning solution using ResNet50, modified for high-accuracy classification of dementia stages from brain MRI scans, leveraging transfer learning to capitalize on pre-trained image recognition capabilities.
- Employed advanced image preprocessing to enhance data uniformity and model training efficacy, significantly boosting diagnostic precision.

- Achieved robust model performance with rigorous validation techniques, demonstrating potential clinical applications for early and accurate dementia staging.

NSFW (Not safe For Work) Text Monitoring App | *Python, Flask, Scikit-learn, Pandas, NLTK*

- Developed an AI-powered tool to detect and filter offensive, hate speech, and NSFW text content in real-time.
- Leveraged machine learning models trained on real-world datasets to ensure accurate and efficient content moderation.
- Integrated a REST API and web interface using Flask, facilitating seamless deployment on Render.

Customer Churn Prediction | *Python, Linear Regression, Decision Trees, Random Forest, Pandas, Scikit-Learn*

- Analyzed telecom customer data to predict churn behavior using machine learning techniques.
- Implemented Logistic Regression, Decision Trees, and Random Forest models, evaluating performance with accuracy, precision, recall, and F1-score.
- Generated insights into customer attrition factors, aiding in targeted retention strategies.

Technical Skills

Programming Languages: Python, C/C++, Java, SQL, JavaScript, HTML/CSS, R
Machine Learning Frameworks: TensorFlow, PyTorch, Keras
Web Development Frameworks: Flask, FastAPI
Libraries: Pandas, NumPy, Matplotlib, Scikit-Learn, NLTK, TA-Lib, QuantLib