ALEX DANDAMUDI

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EDUCATION

Vellore Institute of Technology   **07/2021 – Current**
*Bachelor of Technology - **CGPA** - **7.35***   *Amaravati, India*

SKILLS

Programming	Java, Python, SQL(MySQL)
Core Subjects	Object Oriented Programming(OOPs), DataBase Managment Systems(DBMS), Operating Systems(OS), Computer Networks(CN)
Developer Tools	PyCharm, VS Code, Git, Google Collab
Web Development	HTML, CSS, Javascript, React
Machine Learning	Python with Numpy and Pandas
Libraries	Matplotlib, NumPy, NLTK, Pandas, TensorFlow, Scikit-learn
Data Visualization	MS-Excel, Tableau

PROJECTS

Smart Road Pothole Detection | Machine Learning and Cloud Computing   **06/2023– 09/2023**

- Designed a cutting-edge pothole detection solution leveraging IoT cloud and mobile integration with Python; delivered alerts within 5 seconds, improving response times and user engagement by 40%.
- Designed a GPS-enabled camera robot for pothole detection, processing video feeds at 15 frames per second with 80% precision, integrating IoT cloud capabilities.
- ***ESP32 CAM, CNN, Alerting and Reporting , Pothole Detection Algorithm***

Citizen Journalism Platform | Web Development   **02/2024– 04/2024**

- Developed a user-driven platform for sharing verified news and perspectives.
- Built a responsive interface with React.js and implemented real-time features using Socket.io and Node.js.
- Secured user authentication with Passport.js and established a robust content verification system.
- ***React JS, Node JS, Mongo DB, Socket.io, Passport JS***

Heart Rate Variability As A Predictor Of Emotional States | Machine Learning **06/2024– 09/2024**

- Built a machine learning solution to predict emotional states using HRV data from wearable devices.
- Implemented preprocessing, feature extraction, model training pipelines, achieving 84% accuracy with AdaBoost.
- Conducted comparative analysis of classifiers (Random Forest, Decision Tree) to optimize performance.
- ***AdaBoost, Comparative Analysis, Random Forest, Decision Tree, Flask***

Intrusion Detection System | Machine Learning   **01/2025– 04/2025**

- Built a machine learning-based Intrusion Detection System using Random Forest, XGBoost, and Logistic Regression with over 99% accuracy.
- Cleaned and prepared large datasets (CICIDS2017, CICIDS2018) with techniques like label encoding and feature scaling.
- Tested and fine-tuned multiple models to improve detection accuracy and reduce false alerts.
- ***Python, pandas, NumPy, scikit-learn, XGBoost, TensorFlow/Keras, Jupyter Notebooks***

Portfolio Website | Web Development   **06/2025**

- Designed and developed and clean interactive portfolio using HTML, CSS and Javascript.
- Built a responsive interface with hover and text animations and implemented glass morphism effect.
- ***HTML, CSS, Javascript***

CERTIFICATIONS

- **Externship Certificate:** Artificial Intelligence and Machine Learning Powered by Google Developers
- **ETHNUS - MERN Full Stack**