

Pediredla Venkata Satya Prasanth

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EDUCATION

- **Manipal Institute of Technology** Manipal, Udupi, India
B.Tech in Information Technology; CGPA: 7.55 2021 – 2025
- **Aditya Junior College** Kakinada, Andhra Pradesh, India
Intermediate Education; 92.5% 2019 – 2021
- **Aditya High School** Kakinada, Andhra Pradesh, India
Secondary Education; CGPA: 9.8 2019

TECHNICAL SKILLS

- **Languages:** Python, Java, C, C++, SQL
- **Web Development:** HTML, CSS, JavaScript, Django, Flask, FastAPI, Android Studio
- **Tools & Platforms:** Git, VS Code, Jupyter Notebook, Talend, RapidMiner, Overleaf
- **Operating Systems:** Windows, Linux, MacOS

EXPERIENCE

- **Research Project, Manipal Institute of Technology:** Jan – May 2025
 - Engineered a hybrid ML pipeline combining structured surveys and Reddit text using sentence embeddings and SMOTE balancing.
 - Benchmarked XGBoost, CatBoost, SVM, and MLP models and deployed a Deep Fusion Network for improved diagnostic accuracy.
 - Interpreted model behavior using SHAP plots, AUC-ROC and Confusion Matrix.
- **AI Intern, Swecha - Summer of AI Program:** Jun – Jul 2024
 - Customized Whisper-large to transcribe Telugu speech, fine-tuned using Hugging Face Transformers.
 - Built data processing workflows in Python to clean, segment, and batch audio data for model training.
 - Assessed model performance using WER and CER to validate transcription improvements.

PROJECTS

- **A Million Drizzles:** E-commerce platform for artwork discovery and purchase.
 - Architected secure, role-based Django backends for users, painters, and admins with full CRUD capabilities.
 - Automated custom order tracking, review flow, and payment state transitions.
 - Configured email alerts via SMTP for account activity, order status, and feedback loops.
 - Delivered responsive UI with mobile-first design using HTML5, CSS3, and JS.
 - **Technologies:** Django, HTML, CSS, JavaScript, SQLite, SMTP
- **Price Prediction of Mobiles:** Machine learning model to categorize smartphone price ranges.
 - Utilized a Kaggle dataset containing smartphone specifications; cleaned and engineered features in RapidMiner.
 - Evaluated Naive Bayes, Decision Tree, and Random Forest algorithms for accuracy and overfitting.
 - Ranked feature contributions to improve interpretability and user trust.
 - **Technologies:** Python, RapidMiner, Scikit-learn
- **QuizEase:** Quiz platform designed using HCI principles to enhance accessibility and engagement.
 - Designed Django workflow for progressive question delivery and response validation.
 - Integrated Web Speech API to support voice-based answering and TTS narration.
 - Applied HCI guidelines to craft intuitive, feedback-rich user interactions.
 - **Technologies:** Django, HTML, CSS, JavaScript, Web Speech API
- **CardioPredict:** Clinical support tool for cardiovascular risk estimation.
 - Trained and optimized Random Forest model on anonymized medical datasets.
 - Implemented SHAP-based visualizations to explain individual predictions.
 - Generated personalized PDF reports and configured email automation for result delivery.
 - **Technologies:** Python, Scikit-learn, SHAP, ReportLab, Matplotlib, Django

EXTRA-CURRICULAR ACTIVITIES

- **Taekwondo:** Bronze Medalist at state-level competition.
- **Sports:** Enthusiastic in cricket and badminton.