Pranav Muralidhar

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LinkedIn Github Portfolio

Professional Summary

M.Tech (CSE) candidate with strong foundations in algorithms, data structures, DBMS, and applied machine learning. Experienced in building end-to-end ML prototypes from data exploration and feature engineering to model evaluation and real-time deployment focused on user-centric outcomes. Comfortable translating ambiguous problem statements into well-defined analytical approaches, validating assumptions with data, and communicating actionable insights.

Education

PES University **2024 – 2026**
Master of Technology in Computer Science and Technology; CGPA: 8.0/10.0 *Bengaluru, Karnataka*

KLE Dr MS Sheshgiri College of Engineering and Technology **2020 – 2024**
Bachelor of Engineering in Computer Science and Technology; CGPA: 7.96/10.0 *Belagavi, Karnataka*

KLE's G.I.Bagewadi PU College **2019 – 2020**
Karnataka State Board; Percentage: 81.83% *Nipani, Karnataka*

Technical Skills

Languages: Java, Python, SQL, HTML, CSS, JavaScript
Data & ML: Pandas, NumPy, Exploratory Data Analysis (EDA), Data Visualization, Feature Engineering, Convolutional Neural Network (CNN),Natural Language Processing (NLP)
Database: MySQL, Database Management System (DBMS)
Core Competencies: Data Structures and Algorithms, Object-Oriented Programming, Machine Learning

Work Experience

Persistent Systems **2023**
Persistent Martian Program *Online*

- Completed comprehensive training program in Core Java programming, focusing on object-oriented programming principles and data structure implementation.
- Gained hands-on experience in Database Management Systems (DBMS), including database design and data integrity concepts.
- Developed foundational skills in software development practices and database optimization techniques.
- Successfully completed coursework in enterprise-level programming concepts and best practices.

Projects

Avatar Generation in Metaverse Using Sentiment Analysis | *Python, ML, AI* **Present**

- Engineered an end-to-end Emotion-to-Avatar pipeline by consolidating GoEmotions into 6 major emotion classes using EDA and K-Means, enabling cleaner, more reliable emotion prediction.
- Built a RoBERTa-based emotion inference module to detect emotion from user text and translate it into controllable facial and body-expression parameters (expressiveness, pose, gesture intensity).
- Generated metaverse-ready 3D avatars by emotion-conditioning Stable Diffusion image editing on user photos and converting the final output to 3D assets using Hunyuan3D 2.1.

Agricultural Price Forecasting with Sell/Hold Recommendations | *Python, ML* **Mar 2025**

- Built a decision-support ML pipeline to forecast crop prices using historical mandi data and generate actionable "SELL/HOLD" advisories for farmers/traders.
- Performed data cleaning and EDA to capture trend/seasonality, and engineered time-series features like lags and rolling averages using mandi price and market metadata.
- Trained a regression/time-series forecasting model and designed a threshold-based advisory engine to convert predictions into practical decisions.

2D Car Racing Game | *OpenGL, GLUT, C++* **July 2025**

- Developed interactive 2D racing game featuring real-time graphics rendering, collision detection algorithms, and responsive WASD control system.
- Implemented dynamic obstacle generation engine with procedural content creation, increasing gameplay variety by 70%.
- Optimized game performance achieving consistent 60 FPS through efficient memory management and rendering pipeline optimization.
- Designed modular architecture with separate rendering systems for sprites, textures, and UI components.