Atharva Honparkhe

 (+91) 8847492966   ✉ b23ee1006@iitj.ac.in   in Atharva Honparkhe   ⚙ RepoRogue123   🌐 Portfolio   </> LeetCode

Education

Indian Institute of Technology, Jodhpur   **Expected Graduation: 2027**
Bachelor of Technology in Electrical and Electronics Engineering CGPA:(7.84/10)   *Jodhpur, Rajasthan*

D.A.V Public School, Ludhiana   **2023**
Class 12 – PCM (94.2%)   *Ludhiana, Punjab*

Experience

Indian Institute of Technology Jodhpur   **Aug 2024 – Nov 2024**
Research-Based Project   *Jodhpur, Rajasthan*

- Conducted research on multi-agent reinforcement learning under the guidance of **Dr. Pratik Mazumder**, designing a Q-learning-based GridWorld simulation where autonomous agents learned optimal navigation strategies in dynamic, stochastic environments; achieved a **94% reduction in episode steps** and a **3.7× improvement in cumulative rewards** compared to random policy baselines.
- Developed a real-time interactive simulation interface using **Tkinter**, integrating Q-value heatmaps and episodic performance graphs to rigorously analyze learning convergence and agent behavior across **100+ training episodes**.

Projects

PlaWorDet — Deep Learning, Streamlit, MLP Architectures, Positional Embeddings   ⚙   🌐

- Engineered and curated a large-scale dataset of **100K+** players from FIFA **2017–2023**, fusing positional metadata, performance indicators, and team dynamics to architect a robust MLP-based valuation model; attained a **78.3%** validation accuracy with strong real-world value correlation.
- Designed a dynamic, real-time Streamlit interface with intuitive data input, valuation visualizations, and smart bidding recommendations, delivering an immersive, analytics-driven GUI for FIFA player auctions.

Linguistix — Speaker Identification, MFCC, PCA/LDA, GMM Clustering   ⚙   🌐

- Engineered a speaker recognition framework on **2.5K+** audio clips from **50** speakers using MFCC-based embeddings and dimensionality reduction (LDA, PCA) to improve class separation.
- Integrated semi-supervised Gaussian Mixture Models with ensemble voting, achieving **100%** accuracy with ANN+LDA and **99.67%** with GMM on test data.

Track Tracer — C, TCP Socket Programming, Authentication, File Systems   ⚙

- Built a TCP client-server train booking system in C handling **50** concurrent passengers with real-time data sync and sub-**200ms** response time.
- Implemented OTP login, seat updates across **5+** trains, and persistent logging of **100+** records.

Technical Skills

- **Languages:** Python, C++, C, SQL, HTML/CSS, JavaScript, Verilog, VHDL
- **Technologies:** TensorFlow, PyTorch, scikit-learn, NumPy, Pandas, OpenCV, Mongo DB, Gemini LLM, Streamlit, Flask, React, Android Studio, Pygame, Firebase
- **Utilities:** Git, GitHub, VS Code, LaTeX, Linux, Docker, Arduino IDE

Relevant Courses

- **Completed:** Machine Learning, Data Structures and Algorithms, Probability & Statistics, Stochastic Processes
- **Coursera and Udemy:** Deep Learning Specialization(Coursera), Introduction to Networking(Coursera)

Achievements

- Achieved A- grade in Introduction to Computer Science Engineering
- Secured a position within the top 0.66% among over 1.2 million candidates in JEE Main 2023.

Extracurricular & Positions of Responsibility

Student Guide, Wellbeing Committee, IITJ   **2024 − 2025**
Mentored 12 first-year students, supported academic and emotional well-being and contributed to 5+ wellness initiatives .

State Level Handball Player   **2017 − 2023**
Played competitively, securing 1st place in zonals, 2nd in district, and qualifying for state tournaments.