

ATHARVA HONPARKHE

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Education

Indian Institute of Technology, Jodhpur
B.Tech in Electrical Engineering CGPA: 7.84/10

Expected Graduation: 2027
Jodhpur, Rajasthan

D.A.V Public School, Ludhiana
Class 12 – PCM 94.2%

2023
Ludhiana, Punjab

Experience

Indian Institute of Technology Jodhpur
Research-Based Project under Dr. Pratik Mazumder

Aug 2024 – Nov 2024
Jodhpur, Rajasthan

- Designed a Q-learning-based GridWorld simulation for autonomous agents in stochastic environments; achieved a **94% step reduction** and **3.7× reward improvement** over random baselines.
- Developed an interactive simulation interface using **Tkinter**, including Q-value heatmaps and episodic graphs to analyze learning over **100+ training episodes**.

Projects

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



- Built a **MLP-based** FIFA player valuation model using a curated dataset of **100K+** records from FIFA 17–23, incorporating positional and performance features; achieved **78.3%** validation accuracy.
- Designed a **Streamlit** interface for real-time input, visualization, and smart auction recommendations.

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



- Built a speaker recognition pipeline with **MFCCs**, dimensionality reduction (LDA/PCA), and ensemble voting; tested on **2.5K+ audio clips** from 50 speakers.
- Achieved **100%** accuracy with **ANN+LDA** and **99.67%** with **GMM models**.

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



- Developed a C-based **TCP** client-server booking system with **50** concurrent users and sub-**200ms** response time.
- Implemented secure OTP-based login, seat updates across **5+ trains**, and persistent booking logs.

Technical Skills

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

Relevant Courses

- **IITJ Coursework:** Pattern Recognition and Machine Learning, Data Structures and Algorithms, Probability Statistics & Stochastic Processes
- **Online:** Deep Learning Specialization (Coursera), Introduction to Networking (Coursera)

Achievements

- Achieved **A-** grade in Introduction to Computer Science Engineering.
- Ranked in the top **0.66%** among **1.2M+** candidates in JEE Main 2023.

Extracurricular & Positions of Responsibility

Student Guide, Wellbeing Committee, IITJ

2024 – 2025

Mentored 12 freshmen, supporting academic and emotional growth; contributed to 5+ wellness drives.

State-Level Handball Player

2017 – 2023

1st in Zonals, 2nd in District, qualified for State Tournaments.