

ADITYA RAJ

+91-7633856924 | adityarajwk@gmail.com | [LinkedIn](#) | [GitHub](#)

PROFESSIONAL SUMMARY

AI/ML Engineer specializing in reinforcement learning, LLM applications, and AI-powered web systems. I build production-ready AI products using PyTorch, LangChain, RAG pipelines, and modern web frameworks such as React and Next.js.

SKILLS

Languages: Python, C/C++, Java, JavaScript, TypeScript, HTML, CSS, SQL

Frameworks: React, Next.js, Node.js, Express.js, TensorFlow, PyTorch, LangChain, LangGraph, HuggingFace Transformers

Tools & Platforms: MySQL, MongoDB, PostgreSQL, Git, GitHub, VS Code, Jupyter, Linux, Pandas, NumPy, Scikit-learn

AI/ML: Deep Q-Learning, Bayesian Optimization, RAG, Embeddings, Vector Databases, Chainlit, LiveKit, Model Training, Hyperparameter Tuning, Neural Networks, Reinforcement Learning, CNNs, Transfer Learning, Data Preprocessing, Feature Engineering

Soft Skills: Problem-Solving, Critical Thinking, Team Collaboration, Project Management, Adaptability, Effective Communication, Attention to Detail, Time Management, Self-Directed Learning, Creativity

PROJECTS

Smart Hyperparameter Tuning with Optimization

Nov 2025

- Automated ML hyperparameter tuning with Hyperopt and Bayesian Optimization; integrated search algorithms with scikit-learn for efficient model selection and validation.
- Improved model accuracy by 18% over baseline models by systematically exploring the hyperparameter space and visualizing optimization results.

Tech: Python, Scikit-learn, Bayesian Optimization, Hyperopt, PyTorch [GitHub ↗](#)

Voice AI Game Purchase Assistant – LLM Agent System

Jun 2025

- Built a voice-controlled AI assistant that processes natural language game purchase queries and retrieves pricing and platform data using LLM reasoning pipelines.
- Integrated speech-to-text input, LangChain/LangGraph agent workflows, and vector search retrieval to recommend the best platform for purchasing games.
- Designed modular agent tools for game search, review comparison, and purchase decision simulation.

Tech: Python, LangChain, LangGraph, RAG, Speech Recognition, Embeddings, Vector DB [GitHub ↗](#)

BlockFace – AI-Powered Minecraft Skin Generator

May 2025

- Built an AI web app that generates unique Minecraft skins using self-attention, adaptive residual blocks, and adversarial training pipelines.
- Implemented a scalable React/Next.js frontend, reducing skin generation time by 40% through optimized rendering pipelines.

Tech: TypeScript, React, Next.js, AI Image Generation [GitHub ↗](#)

Track-DQN – Autonomous Racetrack Navigation Agent

Oct 2024

- Developed a Deep Q-Network reinforcement learning agent for autonomous racetrack navigation using OpenAI Gym, applying computer vision for frame processing and feature extraction.
- Implemented experience replay and target networks, improving training stability and achieving an 82% success rate on unseen track configurations.

Tech: Python, OpenAI Gym, Deep Q-Learning, Computer Vision [GitHub ↗](#)

TRAINING

AI-Powered NLP – Summer Training Program | AlgoTutor

Jun 2025

- Built intelligent pipelines using LangChain, LangGraph, LiveKit, and RAG workflows; developed and deployed a resume-analysis system with chunking, vector search, and contextual evaluation.

Tech: Python, LangChain, LangGraph, LiveKit, Chainlit, RAG, Embeddings, Vector DBs, HuggingFace

EDUCATION

Lovely Professional University

Aug 2023 – May 2027

B.Tech – Computer Science & Engineering (AI/ML Specialization) | CGPA: 7.6 | Punjab, India

Saint Joseph's School

Apr 2019 – Mar 2023

Intermediate (Class XII): 67% • Matriculation (Class X): 86% | Kahalgaon, Bihar

CERTIFICATIONS

AI-Powered NLP – AlgoTutor (Jun 2025) | Microsoft AI Applied Skills – Azure (Aug 2024) | AI For India 2.0 – GUVI (Sept 2023)

ACHIEVEMENTS

- Secured Top 20 rank out of 100+ participants – Cyber Security Hack-quest (Jan 2024)