Abhinav Marlingaplar

Pune, India
+91 9511208820 abhinavsm0503@gmail.com LinkedIn GitHub Portfolio

Education

Indian Institute of Information Technology, Kottayam Aug 2023 – Present
Bachelor of Technology in Computer Science *CGPA: 8.27 / 10*

S.N.B.P International School, Pune July 2021 – May 2023
Grade 12 *90.40%*

Relevant Coursework

- Data Structures
- Operating Systems
- Computer Networks
- Database Management
- Cloud Computing
- Machine Learning

Projects

NLP-Studio – Multi NLP Service Platform | MERN Stack, Supabase Vector DB, Groq API Dec 2025

- Engineered a production-ready full-stack NLP platform supporting secure multi-user access with JWT-based authentication (access + refresh tokens) and role-isolated session handling.
- Architected an end-to-end Retrieval-Augmented Generation (RAG) system integrating Xenova embeddings, Supabase Vector Database for semantic search, and Groq LLM APIs for low-latency inference.
- Designed scalable document ingestion and vector indexing pipeline enabling efficient similarity retrieval and context-grounded response generation.
- **Live Demo:** View Deployment

BlogZone – AI-Powered Blog Platform | MERN Stack, Google Gemini API, JWT Aug 2025

- Developed a full-stack blogging platform with modular REST API architecture, secure admin dashboard, and structured content moderation workflow.
- Integrated Google Gemini API to implement AI-assisted blog draft generation from natural language prompts, improving content creation efficiency.
- Implemented JWT authentication with role-based access control and deployed scalable frontend on Vercel with clean client–server separation.
- **Live Demo:** View Deployment

House Price Prediction | Python, Pandas, Scikit-learn, XGBoost June 2025

- Built a high-performance regression pipeline using XGBoost with hyperparameter tuning via RandomizedSearchCV, achieving $R^2 = 0.9204$ on test data.
- Performed advanced preprocessing including ordinal encoding, feature engineering, log transformations, and cross-validation to improve generalization.
- Validated real-world robustness through Kaggle submission achieving RMSE score of 0.13469.

Technical Skills

- **Programming Languages:** C++, Python, JavaScript
- **Frontend:** React.js, HTML5, CSS3
- **Backend:** Node.js, Express.js
- **Databases:** MongoDB, Supabase (Vector DB)
- **Tools & Platforms:** Git, GitHub, Postman, Vercel
- **AI/ML:** NumPy, Pandas, Matplotlib, Scikit-Learn

Additional Highlights

- Solved 400+ algorithmic problems covering graphs, dynamic programming, trees, and advanced data structures.
- Designed end-to-end AI systems involving retrieval and contextual response generation.
- Optimized machine learning models through cross-validation and performance tuning.