

# Dheeraj Yadav

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## EDUCATION

### Lovely Professional University

*BTech. in Computer Science and Engineering — Cgpa: 7.80*

Sept 2022 – June 2026

*Phagwara, Punjab*

### Shri Barfani Academy School

*Class XII — Percentage: 90.8%*

April 2021

*Indore, MP*

### Jawahar Navodaya Vidyalaya

*Class X — Percentage: 91.2%*

April 2019

*Shajapur, MP*

## PROJECTS

### Chatbot | *Next.js, TypeScript, Supabase, LangChain, Gemini AI* | ([Github Link](#))

Dec 2024 - Present

- Engineered a sophisticated RAG-based chatbot leveraging LangChain.js and Google's Gemini AI model, enabling context-aware conversations through vector-based document search and retrieval.
- Implemented real-time streaming responses using Edge Functions, integrated Supabase vector store for efficient document storage and retrieval, and built a responsive chat interface with document upload capabilities.
- Developed structured output generation with Zod schema validation, multi-step reasoning agents, and seamlessly integrated various AI tools while maintaining type safety using TypeScript and modern React patterns.
- Utilized Next.js 14 with React Server Components for optimal performance, implemented API route handlers for backend functionality, and created an intuitive UI with real-time chat streaming features.

### House Price Prediction | *Python, Scikit-learn, XGBoost, Pandas, NumPy, Matplotlib, Seaborn* Feb 2024 - March 2024

- Developed a machine learning model to predict median house values in California using a dataset of 20,640 districts.
- Implemented and evaluated Linear Regression, Random Forest Regressor, and XGBoost Regressor to determine the best-performing algorithm.
- Conducted extensive feature engineering and hyperparameter tuning to improve model accuracy.

### Splitwise | *HTML, CSS, Flask, PostgreSQL*, | ([Website Link](#))

Nov 2024

- Developed a web application to track and split expenses among friends and groups. Key features include user authentication, group creation, expense tracking, bill splitting, and viewing expense history, all presented through a modern, responsive UI.
- Built using Flask, PostgreSQL (Neon), and SQLAlchemy, with authentication handled by Flask-Login. The frontend utilizes Bootstrap 5 and custom CSS for a seamless user experience.

## TECHNICAL SKILLS

**Languages:** C/C++, Java, Python

**Web Technologies:** HTML, JavaScript, JSON, CSS, SQL

**Developer Tools:** Git/Github, VS Code, MongoDB.

**Libraries:** NumPy, Pandas, Matplotlib, Scikit-learn

## TRAININGS AND CERTIFICATE

### CipherSchools Full Stack Development using MERN ([Certificate](#))

July 2024 - Aug 2024

- Successfully completed an 8-week certified online training in Full-Stack Development using the MERN stack (MongoDB, Express.js, React.js, Node.js), covering front-end, back-end, database integration, and a final project.

### Learn to code with AI ([Certificate](#))

March 2024

- Learned how to build and deploy web apps using AI without programming knowledge, along with the basics of HTML, CSS, and JavaScript.

### Algorithms on Strings ([Certificate](#))

March 2024

- Learned Suffix Tree, Suffix Array, and Algorithms on Strings in the course.

## EXTRA CURRICULAR

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- Represented JNV Shajapur in regional level Badminton Tournament.
- Volunteered at LPU E-Sports Tournament.
- Volunteered at LPU One World Cultural Fest.