Ritu Barochiya

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EDUCATION

ATMIYA UNIVERSITY
B.Tech in Computer Engineering
2021 - 2025 | Gujarat, India

DHOLAKIYA SCHOOL
2018 - 2021 | Gujarat , India Class: XII: 93.59 / 100
Class: X: 94.33 / 100

LINKS

Github:// ritubarochiya
LinkedIn:// Ritu-Barochiya

COURSEWORK

UNDERGRADUATE

Software Engineering
Data Analysis And Visualization
Operating Systems
Machine Learning
Artificial Intelligence
Database Management Systems
Compilers Design
Data Structures and Algorithms
Project Management

SKILLS

PROGRAMMING

Experienced :

C/C++ • Python • Javascript
Java •HTML/CSS

Intermediate :

SQL • Shell Script

Familiar:

R • PHP

TECHNOLOGIES

Node.JS • NPrompt Engineering
PowerBI • MySQL • AWS • Excel
Git •Tailwind •Linux •Docker

OTHERS

Problem Solving
Management
Programming
Communication

EXPERIENCE

ILAXO SOFTWARE SOLUTION | Software Engineering Intern

May 2023 – jun 2023 | Gujarat, India

- Gained hands-on experience in frontend development at IlaxoTech, developing key features like form validation, reusable components, and dynamic UI rendering in React.js, while collaborating with senior engineers to optimize coding practices and resolve API challenges. Successfully completed a shipment management task and contributed reusable components to enhance the company's codebase.

PROJECTS

WEB ARTICLE VECTORIZATION AND SEMANTIC QUERY SOLUTION | Python | ChromaDB | OpenAi | Langchain

Nov 2023 – Dec 2023

- Designed a pipeline to extract and process content from web articles, storing over 500+ text chunks in ChromaDB using OpenAI embeddings.
- Built a semantic search engine enabling accurate query resolution with similarity-based retrieval.
- Integrated GPT-3.5-Turbo to generate summaries and answers, improving response precision by 30%.
- Utilized LangChain and OpenAI APIs to streamline NLP workflows for document retrieval and analysis.
- Github:// Web Article Semantic Query

STUDENT PERFORMANCE PREDICTION SYSTEM USING MACHINE LEARNING | Python | scikit-learn | Pandas | seaborn

- Built and evaluated 5 machine learning models, including Decision Tree, Random Forest, Logistic Regression, Perceptron, and MLP Classifier, achieving 85%+ accuracy with Random Forest and MLP on test data.
- Developed a Student Performance Prediction System using a dataset with over 10 features, including gender, grade, absences, and participation, to classify performance into three categories: "H", "M", "L".
- Visualized data insights through 9 parameter-specific graphs (e.g., grade-wise, gender-wise, and topic-wise performance) using Python libraries such as Seaborn and Matplotlib.
- Preprocessed and encoded categorical data with techniques like Label Encoding, and performed a 70-30 train-test split, ensuring compatibility with machine learning workflows.
- Designed a user input interface for real-time predictions, allowing manual input of parameters to classify student performance using trained models.
- Github:// Student Performance Prediction.

WEB COMPILER | Node.JS | Express | Docker | React.JS

- Created a web-based compiler for C, C++, Java, Python, JavaScript.
- Implemented backend services in Node.js to compile and execute code, returning real-time output using shell scripts.
- Integrated a point system based on difficulty levels, with hash-based verification for correct outputs.
- Utilized Docker for standardized environments and scalable deployment, ensuring seamless operation.
- Demo Link:// Web Compiler • Github:// Web Compiler