Bhoomi Jain

Data Scientist | Bhopal, MP, India | +91 9589148357 | bhoomi.jain1212@gmail.com |
linkedin.com/in/bhoomi-jain-1babb42a3 | github.com/bhoomi9589

Professional Summary

Data Scientist and full-stack developer with hands-on experience building end-to-end applications leveraging computer vision, machine learning, and cloud technologies (GCP, AWS). Passionate about creating impactful, data-driven solutions, from real-time gesture control systems to interactive nutrition trackers.

Skills

Languages: Python · Javascript · SQL · HTML/CSS

AI & ML Frameworks: Scikit-Learn · Pandas · NumPy · OpenCV · Dlib · langchain · SciPy

Backend: Flask · Flask-CORS · REST APIs · ElasticSearch · Asynchronous Programming

Frontend & Visualization: React.js · Chart.js · Axios · Streamlit · Matplotlib · Power BI

Cloud & Tools: Google Cloud Platform (GCP) · AWS · Git · PyAutoGUI · Docker

Projects

Real-Time Eye Movement Control System

- Addressed accessibility challenges by engineering a computer vision system that translates real-time eye and head movements into hands-free system commands using Python, OpenCV, and Dlib.
- Implemented a robust blink detection algorithm based on the Eye Aspect Ratio (EAR) to trigger system sleep functionality with high accuracy.
- Developed a gaze-tracking module to control document scrolling and application switching, streaming the low-latency video feed to a web interface via a Flask server.

Calorie & Nutrition Tracker

- Designed and built a full-stack web application to simplify nutritional tracking, featuring a React.js frontend for a dynamic user experience and a Python/Flask backend for data processing.
- Integrated the Spoonacular REST API to fetch and display real-time nutritional data for thousands of food items, enabling users to search and log meals dynamically.
- Implemented interactive data visualization with Chart.js, providing users with clear insights into their macronutrient distributions and calorie summaries.

Real-Time Multimodal AI Agent with Gemini Live API

- Engineered a full-stack conversational AI application to explore natural human-computer interaction, enabling real-time, multimodal (audio/video) conversations with the Google Gemini Live API.
- Reduced interaction latency by over 30% by implementing asyncio and threading for concurrent processing of I/O streams in a stateful Flask backend.

Responsible Consumption & Production AI Tool

- Developed an AI-powered tool using Google Gemini and LangChain to address the challenge of sustainable consumer choices by assessing product sustainability from user input.
- Delivered actionable insights to users by designing a system to analyze product data and suggest eco-friendly alternatives, achieving 90% accuracy in its recommendations.

Lung Cancer Prediction System

- To aid in early-stage risk assessment, developed and trained a logistic regression model that achieved a 94% predictive accuracy in identifying lung cancer risk from patient data.
- Engineered a multilingual, user-friendly interface with Flask to ensure the diagnostic tool was accessible to a diverse, global audience.

College Recommendation System

- Developed a predictive application using a Random Forest Classifier to recommend colleges based on 9+ academic and institutional parameters, including NAAC status and technical focus.
  Integrated Pandas and Joblib for efficient data preprocessing and low-latency model inference, serving results through a Flask-based web interface with dynamic Google Maps location data.

Movie Recommendation

- Built a content-based recommendation system using NLP (CountVectorizer & Cosine Similarity) to analyze movie features (genre, director, cast) and suggest the top 5 most relevant titles.
  Designed a full-stack interface using Flask and Bootstrap, implementing an asynchronous rating system that logs user feedback into a CSV database to drive future model improvements.

Smile detection

- Integrated OpenCV with Arduino via serial communication to bridge computer vision and physical hardware, enabling real-time LED triggers based on visual input.
  Utilized Haar Cascade Classifiers for robust facial feature extraction and expression mapping to automate hardware responses through real-time smile detection.

Certifications

Introduction to Google Cloud Platform 2025
Simplilearn

AWS Cloud Practitioner Essential 2025
Simplilearn / AWS

Generative AI Certification
IBM Skills Build

Python for Data Science
Technology Developers

Basics of Python Programming
Technology Developers