

RAJ MISTRY

Vastral, Ahmedabad, Gujrat

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Education

Ganpat University

MSC IT in AI/ML

May. 2022 – May 2024

Ahmedabad, Gujrat

Relevant Coursework

- Data Science
- Data Analysis
- Python
- Database Management
- NLP
- Internet Technology
- Machine Learning
- Deep Learning
- Web Scraping
- Computer Vision
- Node.js
- Git/GitHub

Experience

Mehta Softech LLP

AI/ML Engineer

Feb 2024 – Present

Ahmedabad, Gujarat

- Developed a face recognition-based attendance system integrating face recognition for accurate identification and real-time tracking.
- Created an HR chatbot using Natural Language Processing (NLP) to facilitate user data retrieval from a database API.
- Built a Node.js application for a biometric attendance system, capturing live punch-in/punch-out data and ensuring secure database integration.
- Technologies: Face-Recognition, Chatbot Development, Biometric Systems, NLP, Python, Flask, Node.js

Nettyfy Technologies

Software Developer AI/ML

July 2023 – Feb 2024

Ahmedabad, Gujarat

- Passionate AI/ML Developer with a strong foundation in software development.
- Proven expertise in designing and implementing cutting-edge machine learning solutions, leveraging my skills in algorithm development, data analysis, and model deployment.
- Excited about contributing innovative solutions to complex problems and staying abreast of the latest advancements in AI and machine learning.
- Technologies: AI, ML, Software Development, Data Science, Data Analysis, Machine Learning, Python, TensorFlow, PyTorch, Innovation

Projects

Biometric Machine Data Integration and Management | *Node.js, PostgreSQL, IP-based biometric machine integration*

- Integrated biometric machine data through an IP-based connection, capturing real-time POST requests.
- Developed a Node.js script to handle and parse different types of data: user punch-in/punch-out, new user additions, and user deletions.
- Designed and managed a PostgreSQL database schema to store processed data in respective tables.
- Ensured robust and scalable architecture to handle large volumes of data and potential future expansions.
- Project Outcome: Successfully created a robust system for integrating and managing biometric machine data, enhancing the accuracy and efficiency of attendance tracking and user management.

Intelligent Chatbot for Enhanced User Interaction | *NLTK, SpaCy, Scikit-Learn, joblib, Flask, Custom API Recognition*

- Designed and trained a text classification model using Scikit-learn, enabling the chatbot to categorize user inputs accurately.
- Developed a custom entity recognition model with SpaCy to extract key information from user queries.
- Implemented a Flask-based web framework to ensure a scalable and maintainable architecture.
- Connected the chatbot to a database via a custom API to retrieve and deliver data-based responses.
- Project Outcome: The intelligent chatbot enhances user experience by delivering accurate and context-aware responses, demonstrating proficiency in modern NLP and machine learning techniques.

PPE Kit Detection Analysis (Ganpat University) | *YOLO, Python, Flask, Streamlit, OpenCV*

- Utilizes the YOLOv8 model for high-precision detection of various PPE items, including helmets, gloves, masks, and more.
- Employs OpenCV for real-time video processing to monitor safety equipment usage continuously.
- Streamlit provides an interactive web interface for users to upload images or videos and view detection results.
- Flask is used to create a RESTful API, facilitating seamless communication between the frontend and the detection model.

Business Card Reader and Data Extraction System | *PyTesseract, OpenCV, NumPy, Pandas, SpaCy (Custom-trained model)*

- Preprocessed business card images using OpenCV to enhance quality and readability.
- Extracted raw text data using PyTesseract for OCR.
- Developed and trained a custom NER model with SpaCy to identify and extract entities like names, organizations, websites, emails, and phone numbers.
- Collected and preprocessed data from multiple business cards to create a high-quality training dataset.
- Project Outcome: Successfully developed a business card reader that accurately extracts key information from business cards, enhancing the efficiency and accuracy of data management.

Chatbot with Rasa Framework | *Python, Rasa Platform, Python, Flask, Rasa NLU*

- Utilizes the Rasa framework for advanced NLP capabilities to understand and respond to user queries.
- Connects seamlessly with a database API to fetch and provide accurate responses based on user questions.
- Supports dynamic question and answer sessions, making it an effective tool for customer service, information retrieval, and more.

Face Recognition Attendance System | *Python, Flask, Facial Recognition, OpenCV, SQL*

- Users register by capturing a selfie, which is stored in the database in Base64 format.
- For every punch-in and punch-out, users take a new selfie.
- The system uses a face recognition API to compare the new selfie with the stored one. If the images match, attendance is confirmed; otherwise, it is not.

Web Scraping and Data Preprocessing Tool | *Selenium, Python, Pandas, Microsoft Excel*

- Implemented web scraping using Selenium and Python to extract data from target websites.
- Preprocessed raw data using Pandas to clean, normalize, and format it according to requirements.
- Stored the processed data in Excel files, ensuring easy access and accurate data representation.
- Developed reusable and scalable scripts to handle multiple websites and varying data structures.
- Project Outcome: The web scraping tool effectively automates the process of data extraction and preprocessing, resulting in high-quality data storage and accessibility.

Technical Skills

Languages: Python, Machine Learning, Deep Learning, NLP, Computer Vision, Node.js, JavaScript, Flask, SQL

Developer Tools: VS Code, Google Cloud Platform, Jupyter Notebook, Pycharm