Personal Information

Name: Vijay Takbhate

Email: vijaytakbhate20@gmail.com

Phone: 8767363681

GitHub: https://github.com/vijaytakbhate2002

LinkedIn: https://www.linkedin.com/in/vijay-takbhate-b9231a236/

Kaggle: https://www.kaggle.com/vijay20213

Experience - Fox Solutions Pvt. Ltd.

Role: Automation Engineer

Duration: Jun 2024 - Oct 2024

Location: Maharashtra

Key Contributions:

- Completed 2 months of internship plus 4 months of full-time work.
- Worked with PLC and SCADA systems, focusing on automating processes and optimizing operational efficiency.
- Collaborated with cross-functional teams to implement automation solutions for industrial applications.

Experience - Cei Design Consultancy Pvt. Ltd.

Role: Python Developer Intern

Duration: Aug 2024 - Sept 2024

Location: Remote, Maharashtra

Key Contributions:

- Specialized in data processing using Python and Excel.

- Utilized OpenCV for image processing tasks.

Experience - Ujucode

Role: Subject Matter Expert Intern

Duration: Aug 2023 - Oct 2023

Location: Remote, Maharashtra

Key Contributions:

- Contributed as a Python developer for a ChatBot project.

- Handled backend development tasks and researched Python modules.

Project - Twitter Post Sentiment Prediction

Details:

- Engineered an ETL pipeline using PySpark and SQL.

- Conducted sentiment analysis using NLP (TF-IDF) and optimized hyperparameters.

- Monitored model performance through MLFlow on Databricks.

- Leveraged Google Cloud Storage and MySQL for data management.

- Deployed the model using Docker and hosted it on Render.

Project - Text-Text Chat-Bot

Details:

- Designed an advanced Chat-Bot using the NVIDIA API and prompt engineering.

- Features include paraphrasing, grammar correction, AI detection, plagiarism checking, and content summarization.

- Targeted at content creators, researchers, and businesses.

- Technologies Used: HTML, CSS, Python Flask, Cloud Database, and Render.

Project - Hand Gesture Recognition

Details:

- Used Google-s MediaPipe framework for detecting hand landmarks and gestures.

- Created and labeled a custom dataset of hand gestures for training.

- Developed a Streamlit application to improve accessibility and flexibility.

Technical Skills

Languages: MySQL, Python, HTML, CSS

Technologies: Streamlit, Flask, VS Code, GitHub, MLflow, Docker, PySpark, Databricks, Google Cloud Platform

Certification

MLOps Bootcamp: Mastering AI Operations for Success (Jun 2024)

- Learned about the MLOps lifecycle and modular programming.

- Acquired skills in Git, Python, Flask, and MLflow.

Education

Bachelor of Technology in Electronics and Telecommunication (May 2024)

Institution: SVERI-s College of Engineering, Pandharpur, Maharashtra

Score: 81.71

Diploma in Electronics and Telecommunication (May 2021)

Institution: SVERI-s College of Engineering, Pandharpur, Maharashtra

Score: 91.73

Blogging

1. Comprehensive Docker Guide - Containerizing Flask Applications

   - Explained core Docker components, including Dockerfile, images, and containers.

   - Provided hands-on tutorials for building, running, and scaling applications.

2. What is Statistical Inference?

   - Discussed parametric inference and hypothesis testing using real-life examples.

Languages

English, Marathi, Hindi

Soft Skills

Critical Thinking, Intellectual Rigor, Problem Solving, Understanding Business Needs

About Vijay Takbhate

Hi, I'm Vijay Takbhate!

Welcome to my GitHub! I'm Vijay Takbhate, a passionate Machine Learning and AI enthusiast with a strong foundation in mathematics and its real-world applications.

About Me:

I specialize in turning data into insights and thrive on solving complex problems with innovative solutions.

Certified MLOps Expert, with expertise in deploying and managing machine learning models in production environments.

Passionate about cutting-edge topics like Large Language Models (LLMs), fine-tuning, and Retrieval-Augmented Generation (RAG).

What I Do:

Machine Learning & AI: Developing algorithms, models, and systems to solve real-world challenges using data.

MLOps: Automating and optimizing the deployment of machine learning models in production.

LLMs & Fine-Tuning: Working with large-scale models to create intelligent, adaptable systems.

RAG: Exploring innovative approaches to enhance model performance through Retrieval-Augmented Generation techniques.

Companies I Worked With

1. Fox Solutions Pvt. Ltd.

- Role: Automation Engineer
- Duration: Jun 2024 - Oct 2024

2. Cei Design Consultancy Pvt. Ltd.

- Role: Python Developer Intern
- Duration: Aug 2024 - Sept 2024

3. Ujucode

- Role: Subject Matter Expert Intern
- Duration: Aug 2023 - Oct 2023

Total Experience: 8 months

Projects Created by Vijay

Skills/Technologies Used:

- PySpark, SQL, NLP, Google Cloud Storage, MySQL
- Flask, Streamlit, MediaPipe, Docker, Databricks

Project Summaries:

1. Twitter Post Sentiment Prediction: Engineered an ETL pipeline using PySpark and SQL for sentiment analysis.
2. Text-Text Chat-Bot: Advanced chatbot with features like paraphrasing and grammar correction.
3. Hand Gesture Recognition: Streamlit app for gesture detection with custom datasets.

Featured Kaggle Notebooks

1. Healthy Fast Foods: KMeans and Visualization

- Description: Clustering fast foods based on calories to identify healthier options.
- Achievements: (Bronze Medal) | 4,604 (Views)

2. Cancer Prediction with 98% Accuracy

- Description: Image processing and CNN model to predict cancer with high accuracy.
- Achievements: (Bronze Medal) | 1,621 (Views)

3. Pneumonia Detection with CNN and ML with 98% Accuracy

- Description: X-ray image-based CNN model for pneumonia detection.
- Achievements: (Bronze Medal) | 2,000 (Views)

4. Stress Identification: NLP with Best Prediction

- Description: NLP project covering EDA, text processing, TF-IDF, and model training.
- Achievements: (Bronze Medal) | 2,710 (Views)

5. Activity Monitoring System Prediction - EDA

- Description: Explored imbalanced dataset techniques for elder activity tracking.
- Achievements: (Bronze Medal) | 680 (Views)

Healthy Fast Foods: KMeans and Visualization

Description: In this project, I explored healthy fast foods and clustered them into three groups based on calorie count. Using these clusters, I identified the healthiest fast food category. This will help people avoid harmful fast foods.

Achievements: Bronze Medal [Medal] | 4,604 Views [Views]

Cancer Prediction with 98% Accuracy

Description: This project focuses on image processing and the construction of a CNN model to predict cancer with 98% accuracy. I also analyzed the models performance metrics.

Achievements: Bronze Medal [Medal] | 1,621 Views [Views]

Pneumonia Detection with CNN and ML with 98% Accuracy

Description: I trained a CNN model using 17,000 X-ray images to build a model for pneumonia detection. The project includes a website for easy interaction with the model.

Achievements: Bronze Medal [Medal] | 2,000 Views [Views]

Stress Identification: NLP with Best Prediction

Description: This NLP project covers the entire process from EDA, text processing, regex operations, TF-IDF, and BOW to model training.

Achievements: Bronze Medal [Medal] | 2,710 Views [Views]

Activity Monitoring System Prediction - EDA

Description: This project involves handling an imbalanced dataset for activity prediction. I explored techniques like undersampling, oversampling, and synthetic minorities. However, due to the low data for labels like stair descending and stair ascending, I avoided these techniques to prevent data loss and overfitting. The model is suitable for elder activity tracking, potentially deployable on hardware like Raspberry Pi.

Achievements: Bronze Medal [Medal] | 680 Views [Views]

Suggestions: Try the imbalance handling techniques mentioned in my notebook and share your results in the comments.