Vivek Choudhari

choudhari.vivek98@gmail.com | +91 9890293565 | LinkedIn | My Portfolio | GitHub Repository

Innovative Data Scientist with 3.7+ years of experience in developing and deploying Machine Learning solutions across diverse domains. Skilled in leading high-performing teams, optimizing data-driven workflows, and implementing scalable AI models. Proven track record of improving operational efficiency by 70% and reducing data processing time by 80% through advanced analytics and automation. Passionate about leveraging AI for predictive modeling, object detection, and intelligent decision-making to drive business impact

AREA OF EXPERTISE

Programming
- Python
- SQL

Machine Learning & Deep Learning
- Natural Language Processing (NLP)
- Convolutional Neural Network (CNN)
- Regression
- Classification
- YOLO Detection
- Gen AI Concepts
- OpenAI API Concepts
- Ollama, Gemma

Packages
- Numpy
- Pandas
- Scikit
- TensorFlow
- Keras
- Matplotlib
- OpenCV

Data Visualization
- Power BI

Operating System
- Linux/Windows Software Deployments

Competencies
- Team work & Collaboration
- Decision Making
- Statistical Analysis
- Great Communication
- Project Management
- Continuous Learning

WORK EXPERIENCE

Medimaze Solutions Pvt. Ltd. | Data Scientist

May 2023 – Present | PCMC, Maharashtra

- Led AI-driven solutions to improve diagnostic accuracy and operational efficiency which will in turn reduce the diagnosis time by around 80%.
- Worked with cross-functional teams to integrate AI into existing medical workflows. Implemented cost-effective, scalable solutions, saving time and resources.
- Managed AI project lifecycles, ensuring alignment with strategic goals and compliance.
- Identified and resolved workflow challenges, driving process automation improvements.
- Maintained high standards of quality and compliance in AI models.

Projects:

AI-ML Deep Learning Models in Chest X-Ray

- Developed deep learning models for chest X-ray pathology detection, including Cardiomegaly, Pleural Effusion, Pneumothorax, Tuberculosis, and more, with validation accuracies above 93%.
- Designed custom algorithms for clinical measurements like Cardiac Size and Costophrenic Angle to support diagnosis.
- Curated large datasets and implemented data pre-processing techniques for optimizing model performance and accuracy.

YOLO Pathology Detection AI in Chest X-Ray

- Created and deployed YOLO-based models for detecting chest abnormalities such as nodules and rib fractures with validation accuracies of more than 97%, significantly improving detection rates and workflow efficiency.
- Led the integration of YOLO models into the clinical diagnostic pipeline, ensuring real-time detection and precise abnormality identification.

Simplified Report Generative AI (Mobile Healthcare App)

- Developed an AI chat bot to simplify medical reports for patients, explaining medical terms and findings. Initially integrated with ChatGPT API, now using OLLAMA Gemma for enhanced functionality.

Generative AI for Machine Protocol (CT/MRI)

- Built an AI system that guides machine technicians on correct protocols for CT & MRI scans, ensuring accurate scan and reducing human error.

Gender-Specific Reporting AI

- Introduced an Ollama AI to flag and prevent gender-specific reporting errors, ensuring no male-specific terms appear in female reports.

Generative AI for Report Labels/Tags

- Automated the tagging of patient studies (Normal/Abnormal) using AI to streamline workflow and data organization.

EDUCATION

B.Tech. Engineering
Vishwakarma Institute of Information Technology, Kondhwa, Pune-46
2017 – 2021

TRAININGS

Data Science & Data Analytics
ExcelR Academy
Jan 2023-June 2023
Baner, MH

PUBLICATIONS

Mathematical Modelling of an Automatic Bag Mask Valve Emergency Ventilator
International Research Journal of Engineering And Technology (IRJET)
Sept 2020

Cognizant Technology Solutions | Programmer Analyst

Jul 2021 – Apr 2023 | Pune, Maharashtra

Projects: British Gas, UK

- Conducted in-depth analysis of customer attrition for British Gas, UK, identifying key factors contributing to churn
- Developed machine learning models to predict customer churn and provided actionable insights to mitigate attrition rates.
- Applied data science techniques to analyze text data, extracting insights on service challenges across different cities, areas, and demographics.
- Collaborated with cross-functional teams to implement data-driven solutions and optimize customer retention strategies.

Cognizant Technology Solutions | Internship | PA Trainee

Feb 2021 – June 2021 | Pune, Maharashtra

- Trained in C, Python, SQL, and JavaScript, gaining familiarity with Agile methodology and Automation Testing.
- Executed projects like "Book Tour from Redbus.com" for Automation Testing and contributed to Data Science projects, including "Mobile Price Prediction" and "Sentiment Analysis."
- Actively pursued further learning through Udemy certifications to enhance skills.

CERTIFICATES

GL Academy	AI for Healthcare
ExcelR Solutions	Data Science Certification
ExcelR Solutions	Data Analytics Certification
IBM	Machine Learning with Python
Udemy	Artificial Intelligence A-Z™ 2023
Udemy	The Data Science Course 2023: Complete Data Science Boot camp
Microsoft Certifications	AI-900: Azure AI Fundamentals by Microsoft Certifications
Udemy	Deep Learning A-Z™: Hands-On ANN
Udemy	Machine Learning A-Z: Hands-On Python & R
Udemy	Feature Engineering for Machine Learning

PROJECT CASE STUDIES

Lung & Colon Cancer Image Classification (Classification using CNN)

- Developed a model using a dataset of 25,000 histopathological images across five classes.
- Preprocessed images through resizing, normalization, and augmentation techniques.
- Leveraged CNN architectures to classify images into various types of cancerous and benign tissues.

Disease Prediction (Regression)

- Created a predictive model for assessing apoplexy risk using 5,000 medical study records.
- Analyzed patient demographics, medical history, and lifestyle factors for accurate predictions.
- Applied data preprocessing techniques to ensure the quality and reliability of the model.