# Vivek Anil Choudhari

**Qualifications:** B.Tech. in Engineering (Vishwakarma Institute of Information Technology, Pune)
**Total IT Experience:** 3.5+ years
**Specialization:** Data Science, Machine Learning, AI in Healthcare

**Experience Summary:**

A results-driven Data Scientist with over 3.5 years of experience in leveraging AI and machine learning to drive innovative solutions in the healthcare sector. Specialized in medical imaging, including chest X-rays, pathology detection, and AI-driven diagnostic systems. I have successfully led a team of Data Scientists and Python Developers, guiding the development and deployment of advanced machine learning models that improved diagnostic accuracy and operational efficiency. My leadership has resulted in the successful completion of 10+ pathology detection models in Chest CR with over 90% accuracy.

I am passionate about contributing to healthcare innovation through leadership roles, particularly in enhancing diagnostic technologies and supporting better patient care outcomes. Additionally, I have hands-on experience in client interactions, where I met all data and project requirements, and was heavily involved in decision-making processes impacting business and project success.

**Domain Knowledge:**
Specializing in the development and deployment of AI/ML solutions for the healthcare industry, I have a strong focus on medical imaging, particularly for detecting minute abnormalities in chest X-rays using deep learning models like CNN and YOLO. My work in pathology detection and AI-assisted diagnostics has directly contributed to improving clinical decision-making processes and operational workflows in healthcare organizations. I also have extensive experience integrating these technologies into real-world systems, collaborating with cross-functional teams to deliver high-impact solutions.

**Skills:**

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| **Programming** | Python, SQL |
| **Machine Learning & Deep Learning** | Natural Language Processing (NLP), Convolutional Neural Network (CNN), YOLO Detection, Regression, Classification, Generative AI |
| **Packages & Tools** | NumPy, Pandas, Scikit-learn, TensorFlow, Keras, OpenCV, Power BI |
| **Data Visualization** | Power BI |
| **Competencies** | Leadership, Team Collaboration, Strategic Decision Making, Client Interactions, Statistical Analysis, Communication, Project Management, Continuous Learning |

## Project Experience

**Project 1:**

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| **Organisation** | Medimaze Solutions Pvt. Ltd. |
| **Project Name** | AI-ML Deep Learning Models in Chest X-Ray |
| **Client Name** | In House Project |
| **Duration (From – To)** | May 2023 to Present |
| **Description** | Led the development of deep learning models to detect multiple pathologies in chest X-rays, including Cardiomegaly, Pneumothorax, and Tuberculosis, achieving accuracy rates above 90%. Curated large datasets, designed custom algorithms, and enhanced model performance through advanced pre-processing techniques. |
| **Business Domain** | Healthcare/Medical Imaging |
| **Project Type** | AI/ML Model Development |
| **Technologies** | Python, TensorFlow, Keras, OpenCV, YOLO |
| **Role** | Lead Data Scientist, responsible for overseeing all aspects of model development, from data collection to model deployment. Worked closely with cross-functional teams and clients, leading decision-making for software and hardware solutions. |
| **Team Size** | 4 |
| **Achievements** | Completed over 10 pathology detection models with 90+% accuracy in Chest CR. Successfully integrated AI models into clinical workflows to improve diagnostic efficiency. |

**Project 2:**

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| **Organisation** | Medimaze Solutions Pvt. Ltd. |
| **Project Name** | YOLO Pathology Detection AI in Chest X-Ray |
| **Client Name** | In House Project |
| **Duration (From – To)** | Sept 2023 to Present |
| **Description** | Developed YOLO-based object detection models to detect minute abnormalities in chest X-rays, such as nodules and rib fractures, with higher sensitivity and specificity compared to traditional methods. |
| **Business Domain** | Healthcare/Medical Imaging |
| **Project Type** | AI/ML Model Development |
| **Technologies** | Python, TensorFlow, Keras, OpenCV, YOLO |
| **Role** | Lead Data Scientist, responsible for overseeing all aspects of model development, from data collection to model deployment. Worked closely with cross-functional teams and clients, leading decision-making for software and hardware solutions. |
| **Team Size** | 4 |
| **Achievements** | Improved chest X-ray detection by enhancing the sensitivity for small, difficult-to-spot abnormalities using YOLO, leading to faster diagnosis and better patient outcomes. |

**Project 3:**

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| **Organisation** | Cognizant Technology Solutions |
| **Project Name** | Customer Attrition Prediction for British Gas |
| **Client Name** | British Gas, UK |
| **Duration (From – To)** | July 2021 to April 2023 |
| **Description** | Analyzed customer churn factors and developed machine learning models to predict customer attrition for British Gas, providing actionable insights to improve retention strategies. |
| **Business Domain** | Telecom/Utilities |
| **Project Type** | Data Science/Customer Analytics |
| **Technologies** | Python, SQL, Scikit-learn, Pandas, Matplotlib |
| **Role** | Programmer Analyst, responsible for developing predictive models, conducting data analysis, and collaborating with cross-functional teams to improve customer retention strategies. |
| **Team Size** | 6 |
| **Achievements** | Delivered predictive models that contributed to a significant reduction in customer churn by identifying key factors influencing attrition. |

**Project 4:**

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| **Organisation** | Cognizant Technology Solutions |
| **Project Name** | Sentiment Analysis for Customer Reviews |
| **Client Name** | In House Project |
| **Duration (From – To)** | February 2021 to June 2021 |
| **Description** | Created a sentiment analysis system to classify customer feedback into positive, negative, or neutral sentiments. Utilized NLP techniques to pre-process text and employed classification algorithms like Logistic Regression and Naive Bayes. |
| **Business Domain** | Retail/Customer Feedback |
| **Project Type** | Data Science/Analysis |
| **Technologies** | Python, NLTK, Scikit-learn |
| **Role** | Intern, contributing to data pre-processing, feature extraction, and model evaluation. |
| **Team Size** | 1 |

**Training Attended:**

| Course Name | Details | Duration |
|---|---|---|
| Data Science & Data Analytics | ExcelR Academy, Baner, Maharashtra | January 2023 to June 2023 |

**Awards and Recognitions:**

- Best Team Lead Award (2023-24) for outstanding leadership and driving high-performance teams at Medimaze Solutions.
- Recognized multiple times for meeting project deadlines and delivering quality AI-driven solutions on time.
- Successfully trained and mentored over 6 interns in AI/ML techniques during my tenure at Medimaze Solutions.

**Certifications:**

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| Jan 2024 | GL Academy | AI for Healthcare |
| May 2023 | IBM | IBM - Machine Learning with Python |
| Apr 2023 | Udemy | Artificial Intelligence A-Z™ 2023 |
| Apr 2023 | Udemy | The Data Science Course 2023: Complete Data Science Boot camp |
| Jun 2022 | Microsoft Certifications | AI-900: Azure AI Fundamentals by Microsoft Certifications |
| May 2022 | Udemy | Deep Learning A-Z™: Hands-On ANN |
| Apr 2022 | Udemy | Machine Learning A-Z: Hands-On Python & R |
| Apr 2022 | Udemy | Feature Engineering for Machine Learning |