VIVEK ANIL CHOUDHARI

Data Scientist | Machine Learning Specialist | NLP & GenAI Enthusiast | Predictive Analytics Expert
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Innovative Data Scientist with 4+ years of experience in developing and deploying Machine Learning solutions across diverse domains. Skilled in leading critical projects, optimizing data-driven workflows, and implementing scalable AI models. Proven track record of improving operational efficiency by 80% and reducing data processing time by 90% through advanced analytics and automation. Passionate about leveraging AI for predictive modeling, object detection, & decision-making to drive business impact.

PROFESSIONAL EXPERIENCE

Medimaze Solutions Private Limited, Pune, MH

Data Scientist | May 2023 – Present

- 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:

  MRI Spine Vertebrae Segmentation (Ongoing)
- Leading an AI for automatic vertebrae segmentation from sagittal MRI spine scans.
- Focused on model development and integration into clinical workflows to aid early pathology detection.

  Tender Summarisation Using LLM (Ongoing)
- Building an LLM solution using RAG, vector DBs, and embeddings to summarise 400+ page tenders.
- Developed a Streamlit-based UI to test precise, actionable 1-2 page summaries.

  AI-ML Deep Learning Models in Chest X-Ray
- Built deep learning models for detecting major chest X-ray pathology with validation accuracies above 93%.
- Designed clinical measurement tools and deployed on a Linux server for real-world use.

  YOLO Pathology Detection AI in Chest X-Ray
- Created and deployed YOLO-based models for detecting nodules and rib fractures with accuracies of more than 97%.
- Integrated into clinical diagnostic pipeline, ensuring real-time detection and precise abnormality identification.

  Simplified Report Generative AI (Mobile Healthcare App)
- Developed an AI chatbot 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. Integrated with OLLAMA Gemma for enhanced functionality.

  Gender-Specific Reporting AI
- Introduced an AI System 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.

Cognizant Technology Solutions, Pune, MH

Analyst | July 2021 – Apr 2023

- Led development of ML models to predict customer churn for British Gas (UK), delivering actionable insights that improved retention strategy decisions.
- Built end-to-end pipelines for customer feedback analysis, applying NLP techniques like sentiment analysis, topic modelling (LDA), and keyword extraction to identify service gaps across regions.
- Designed and deployed a classification model to categorize service complaints, achieving 87% accuracy and enabling faster issue resolution.
- Conducted A/B testing simulations for customer retention campaigns, analysing experimental outcomes and recommending winning strategies using statistical inference.
- Optimized feature selection and model interpretability using SHAP and LIME frameworks, enhancing trust and explainability for business stakeholders.
- Created clustering models (K-Means, DBSCAN) for customer segmentation based on behavioural and demographic data, helping marketing teams design targeted campaigns. Collaborated on a time series forecasting project, predicting service demand trends and aiding in better workforce and logistics planning.
- Documented and presented findings through interactive dashboards (Power BI, Tableau) and technical reports, ensuring stakeholder alignment and visibility.

Internship Trainee | Feb 2021 – July 2021

- Developed predictive models, clustering algorithms, and EDA dashboards during internship training, applying end-to-end ML workflows. Also built CNN models for cancer image classification and regression models for disease risk prediction.

SKILLS

Programming & Tools: Python, SQL, Power BI, Linux/Windows (Command-line scripting, basic deployments)

Machine Learning & Deep Learning: Regression, Classification, CNNs, YOLO Object Detection, Natural Language Processing (NLP), Generative AI (OpenAI API, Ollama)

Libraries & Frameworks: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Matplotlib, OpenCV

Core Strengths: Data Analysis, Statistical Thinking, Project Ownership, Team Collaboration, Technical Communication, Rapid Learning

EDUCATION & TRAININGS

Vishwakarma Institute of Information Technology, Pune, MH

Bachelors of Technology, Mechanical Engineering (2021)

ExcelR Academy, Pune, MH

Data Science & Data Analytics (2023)