

# Dhananjay Mudgule

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## Professional Summary

- Data Scientist and Generative AI Engineer with 3+ years of experience developing, deploying and monitoring Machine Learning and AI solutions to the business problems, to automate processes, enhance decision-making, and deliver scalable business insights.
- Hand-on experience on AI agents using frameworks like Phidata, CrewAI, Langgraph, OpenAI Swarm, AutoGen.
- Expertise in Generative AI, Prompt Engineering, LLMs (OpenAI, Google, Meta, Mistral), Vector Databases (ChromaDB, Pinecone) and cloud platforms (AWS, Google Cloud, Azure) using Frameworks such as LangChain, LlamaIndex.
- Hands-on experience in building end-to-end AI pipelines, fine-tuning and deployment of Open and Closed source LLMs (OpenAI, Gemini, Claude, Mistral, Llama, Phi)
- Proficiency in Data Science, Machine Learning, Deep Learning, Natural Language Processing, A/B Testing with Python (Hugging Face, Transformers [BERT, GPT, T5], Scikit-learn, TensorFlow, Keras, PyTorch, NLTK, Spacy, Gensim, Flask, Fast API, Streamlit, Chainlit).
- Proficient in writing clean, production-ready Python code using OOP principles, creating APIs using FastAPI or Flask, managing source code with Git and GitHub, creating CI/CD pipelines using GitHub Actions, and containerizing applications with Docker for efficient deployments.
- Expertise in Data Analysis and Data visualization using SQL, Power BI, Grafana, Matplotlib, Seaborn to transform complex data challenges into actionable insights.

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## Work Experience

### All My Health (A Blenheim Chalcot venture)

Data Scientist

Mumbai  
Jul 2024 – Present

- Designed Health Assistant – a conversational AI bot to provide personalized health assistance and insights for users by using AI Agent and RAG.
- Health Data Analysis to Extract Various Insights solution using Retrieval-Augmented Generation (RAG) to extract actionable insights from health data, automated the process of visualizing medical parameters using AI models to improve data comprehension.
- Developed an audio-scribing tool to convert patient-doctor conversations into structured medical summaries using OpenAI Whisper, saving 44% of doctors' time.
- Implemented an AI system to extract and process metadata from DICOM medical imaging files for streamlined workflows automate the sending DICOM files to patients.

### Blenheim Chalcot

Data Scientist

Mumbai  
Jan 2022 – Jun 2024

- Automated Serverless Medical Records Processing pipeline using Google Cloud Function, Google Vision (OCR), Pub-Sub, and Google FHIR store, enabling structured storage in FHIR format and reducing processing time by 55%.
- Created a Sales Data pipeline to transfer Zoho CRM data to Google Big Query via Zapier, enabling real-time analysis using Grafana and cutting reporting time by 45%.
- Developed AI (RAG) based cohort analysis tools for WHO CVD and Fall Risk Analysis, delivering actionable insights for Healthcare Providers and personalised insights for patients.
- Developed and deployed a Medical Device Image Analysis to extract vital parameters from medical device images, automating 86% of manual image analysis tasks.
- Built a medical record processing pipeline on AWS for tasks including thumbnail generation, text extraction using OCR, text storage, parameter extraction, and database population reducing manual effort by 60% and improving data accuracy.
- Deployed a document Classification and Splitting model to classify and split large healthcare records, achieving 92% accuracy.

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## Skills

- **Programming Languages:** Python, SQL
- **Generative AI:** AI Agents, Retrieval Augmented Generation (RAG), Vector Database, Large Language Models (LLMs), Prompt Engineering
- **Cloud Platforms:** *Google Cloud Platforms* (Gemini, Vertex AI, Document AI, Cloud Function, Cloud Run, Big Query, Pub Sub, FHIR store, Vision OCR, Cloud Storage), *Amazon Web Services* (S3, Lightsail, EC2, SageMaker, Lambda, Textract, Rekognition, Comprehend, Comprehend Medical, SNS), *Microsoft Azure* (Azure OpenAI, Computer Vision, OCR)
- **Frameworks:** TensorFlow, PyTorch, Hugging Face, LangChain, LlamaIndex, Streamlit, Chainlit, FastAPI, Flask
- **Visualization:** Power BI, Matplotlib, Seaborn
- **Tools:** Git and GitHub, Docker, Postman, Zapier, Grafana, Zoho CRM, Notion.

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## Education

- **B. Tech** in Electronics and Telecommunication Engineering

*(Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad – MH)*

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## Hobbies

- Singing and Swimming