ROHAN BHATANE

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SUMMARY

AI/ML Engineer with expertise in multi-agent systems, RAG architectures, and production ML. Hands-on experience building healthcare and enterprise AI solutions using LLMs, Traditional ML and modern data engineering practices

EDUCATION

Northeastern University; Masters of Science in Artificial Intelligence   **Sep 2023 - Dec 2025**
Courses: Deep Learning, Programming Design Paradigm, RSN, Statistics for Bioinformatics   *Boston, MA*

MIT WPU, Bachelors of Technology in Computer Science and Engineering   **Aug 2019 - May 2023**
Courses: Mathematics, DSA, Machine Learning, Data Warehouse and Data Mining   *Pune, MH*

EXPERIENCE

Renal Research Institute   **Jun 2025 - Sep 2025**
Data Science Intern   *New York City, NY*

- Created a Food Recipe nutrition app that instantly provides personalized meal plans for renal patients based on nutrition restrictions, improving dietary adherence and reducing manual dietitian workload and time
- Deployed **agentic RAG/FAISS architecture** filtering 10,000+ recipes against patient-specific restrictions in seconds, cutting meal planning time from hours to under 10 seconds
- Leveraged **GPT-4o/GPT-4o-mini** for **multi-agent** intelligent meal plan generation balancing medical and cultural needs, boosting patient satisfaction scores by 50%
- Analyzed 100,000+ dialysis patient records to predict **ICW/ECW/TBW** fluid levels achieving **R^2 of 0.92**, providing BCM equivalent capabilities for clinics where BCM machines are absent
- Performed **Exploratory Data Analysis**, **data preprocessing and feature engineering** in **SageMaker Notebooks**, building **XGBoost** model for BCM equivalent fluid predictions on treatment data

ADAIQ   **Jul 2024 - Apr 2025**
Generative AI Intern   *Boston, MA*

- Accelerated shoe product development decisions by 4x through LLM-powered sentiment analysis, attribute scoring, and pattern detection on customer feedback data
- Created a **Python** pipeline with predefined functions for plotting, model output ingestion, and AI summaries to auto-generate client-ready reports, applying product developer thinking to optimize report structure and user experience
- Enabled AI-driven 2D image-to-3D mesh generation for shoe components using a two-stage framework with models **Zero123** and **MiDaS** on **V100 GPUs**, accelerating product design development
- Collaborated on **CI/CD pipeline** development using **AWS Glue**, **Step Functions**, and **Athena** to integrate Generative Design and Insights Models into the data flow
- Built an analytics layer in pipeline to display model outputs and visualizations in client-facing applications

Bizamica Software   **Mar 2022 - Jun 2022**
Machine Learning Intern   *Pune, MH*

- Developed ML models in Python using **OpenCV**, **CNN**, and **Azure OCR** with NLP techniques (**POS**, **NER**) for advanced document image processing, including checkbox and radio button data extraction achieving 97% accuracy
- Integrated these ML and NLP capabilities into the **IZDOX platform**, boosting operational efficiency by 95% in automated PDF and scanned document processing workflows

PROJECTS

PlanMate | *React, NodeJS, Typescript, MCP*   **Sep 2025**

- Eliminated hours of manual travel research for users by building full-stack app that converts natural language requests into personalized itineraries visualized on maps with optimized routes and real-time events
- Architected **GPT-4o** powered **multi-agent** system integrating Google Maps, Ticketmaster, and travel APIs to deliver comprehensive trip planning with attractions, routing, and event scheduling

Image Generation using CGAN | *Python, Tensorflow*   **Apr 2024**

- Trained a **Conditional GAN** in TensorFlow to generate handwritten digit images, cutting misclassifications by 25% and boosting realism by 40%

Image Processor | *Java, Java Swing*   **Dec 2023**

- Programmed a scalable image processing software in Java using **MVC architecture** with **Java Swing** UI, implementing advanced features including compression, blur effects, image splitting, and RGB histogram plotting

TECHNICAL SKILLS

Languages: Python, C++, R, Java, JavaScript, TypeScript, HTML, CSS, SQL
Libraries/Tools: AWS, Scikit-learn, LangGraph, MCP, Pandas, Numpy, TF-Keras, PyTorch, OpenCV, Android Studio, CUDA
Areas: Deep Learning, Agentic AI, Data Science, MLOps, Prompt Engineering, CV, RL, Data Engineering, Product development
Certifications: AI Agents Course (Hugging Face), Neural Networks and Deep Learning, Applied ML, Introduction to Data science in python (Coursera)