

Rohan Paul Richard

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WORK EXPERIENCE

AI Engineer

AmalgamRx

May. 2024 – Present

Wilmington, Delaware (Remote)

- Engineered and deployed the AI chat experience for an app by Otsuka Precision Health to assist caregivers of patients with Alzheimer's Disease.
- Developing demo experiences for various pharmaceutical companies with specialized prompting techniques, orchestrated AI frameworks, frontend technologies such as Next.js and more.
- Organising and handling deployments and integrations for all AI-related functions using tools such as AWS Bedrock, ElevenLabs, and more.

Data Science Intern

AmalgamRx

Aug. 2023 – May. 2024

Wilmington, Delaware (Remote)

- Conceptualizing, implementing, and enhancing a highly parallelized stateless AI chat microservice architecture based server.
- Developing demo chatbots with specialized prompting techniques and frontend technologies such as React.
- Exploring options for deployment of Large Language models for real-time inference in applications.
- Deploying API endpoints using various frameworks to serve models for internal use cases and performing load testing.

Software Trainee

Logituit

May. 2023 – Jul. 2023

Bangalore, Karnataka

- Worked on REST APIs to be deployed and used in an intensive-use production environment.
- Setup and performed integration of Relational and Document style DBMS such as MongoDB, MySQL, Cassandra, Redis, SQLite and more
- Built a recommendation system trained on the 50k IMDB movies dataset for leading OTT services.

Student Volunteer

Computer Technology Centre, Karunya University

Mar. 2022 – Mar. 2023

Coimbatore, Tamil Nadu

- Learnt AI and machine learning through various courses from companies such as Google, NVIDIA and Azure
- Ran the 100 DOC program (100 Days of Code) to teach competitive programming techniques and strategies.
- Conducted data science lifecycle tasks on large datasets, ensuring data quality and completeness to support machine learning algorithms.
- Trained 200+ students in 7+ workshops on topics ranging from data analysis to machine learning

Head, Internal Relations

LAESTE India LC Karunya

Oct. 2021 – Oct. 2023

Coimbatore, Tamil Nadu

- Coordinated a team of 60 to send students to do internships in various countries across the globe.

EDUCATION

Karunya University

B.Tech. Computer Science and Engineering

May, 2024

Coimbatore, Tamil Nadu

- Graduated with a CGPA of 8.07
- Active member and leader of societies and clubs in college.
- Integrally involved in initiatives to educate the student base on topics such as Deep Learning, Competitive programming and more.

St. Joseph's Public School, King Koti

ISC - Class 12

May, 2019

Hyderabad, Telangana

- Placed fourth in class in the MPC with Computer Science stream with 86%
- Held the position of Vice President of the School Cabinet, Head of Debate Team, and winner of several technical and literary competitions and awards on a national level
- School Topper in Computer Science

The Hyderabad Public School, Begumpet

ICSE - Class 10

May, 2017

Hyderabad, Telangana

- Graduated with a score of 85% in the Math and Sciences stream along with Computer Science
- Active participant and frequent winner in technical and literary events
- Member of the school band, photography club, and declamation society

CERTIFICATIONS & SKILLS

- **Certifications:** Microsoft Azure AI Fundamentals, NVIDIA Getting Started with AI on Jetson Nano, NVIDIA Building Video AI Applications at the Edge on Jetson Nano, edX Introduction to Data Science, edX Introduction to Linux, edX Python Basics for Data Science, Udacity AI programming with Python Nanodegree
- **Skills:** Critical Thinking, Leadership, Programming, Problem Solving, Communication, Research, Networking, Teamwork, Strategic Planning, Graphic Designing
- **Tools & Tech Stack:** Python, FastAPI, React, TypeScript, NextJS, AWS, Vercel, Render, Deepgram, Elevenlabs, OpenAI, Claude, Django, Golang, Tailwind, Cursor, ShadCN, Pandas, Tensorflow, Numpy, Seaborn, EDA/AutoEDA

PROJECTS

- **TeachGPT:** An AI chatbot app built in a client-server model specifically designed and targeted to academic institutions. It consists of React with Bootstrap for the frontend, and FastAPI along with assorted technologies in the backend. A PostgreSQL database is used as the database for everything. Retrieval Augmented Generation (RAG) is implemented in order to enhance chat with the Mixtral 8x7B MOE LLM.
- **FastRTC AI Chat:** Created a NextJS page for a fast real-time chat application using FastAPI and FastRTC in the backend. Implemented components from ShadCN as well as handling WebRTC.
- **Knowledge Graph Extractor:** A set of intelligent agents that can extract and maintain knowledge graphs from conversations. It consists of two main POCs: A *Knowledge Graph Extraction Agent* - Extracts structured information from text and a *Conversational Knowledge Graph Agent* - Maintains a knowledge graph of the user throughout and during a conversation.
- **Pneumonia Prediction with Deep Learning:** Ideated, designed, created, developed and implemented a deep learning neural network built with Keras on the Tensorflow framework. Implemented a CNN model on the dataset to achieve the same. Achieved a peak accuracy of 96% with a 0.2% False Negative rate. Currently working towards publishing a research paper on the same.
- **Personal Portfolio:** Used NextJS, Tailwind, React, and ShadCN along with Aceternity to develop and implement a portfolio with smooth and seamless animations.
- More at <https://github.com/rohanprichard>