

Biographical Background:

Karteek Varma Pericharla, who is also called as Karteek and sometimes Varma, is a dedicated and ambitious Artificial Intelligence student who pursued his master's in computer science in the US. He is currently a resident of Chicago, Illinois. His Major/specialization is in Artificial Intelligence at the University of Illinois Institute of Technology (IIT), Chicago and this is where he is currently at. He graduated in May 2025 with a GPA of 3.3/4.0. This marks his second master's degree, building upon his prior MBA in Business Analytics, Artificial Intelligence, and Machine Learning from Woxsen University, where he learned application of AI for business. His fascination with AI was sparked during his techno-managerial journey at Woxsen, prompting him to deepen his technical expertise through a second graduate program in the United States. Before his postgraduate studies, he earned a bachelor's degree in mechanical engineering from JNTUK Kakinada. His transition towards computer science was when he was doing a robotics 101 course during his bachelor's degree, where he realized that he could spread his wings more freely by communicating his ideas via programming. Karteek to this day still loves to go back to his Mechanical engineering basics for the love of it.

In short, Karteek is a Machine Learning Engineer, who is currently looking for a job in the US. His status in the US is F1-student, while he is under the process for his F1-OPT as of now.

Professional Experience:

Karteek's professional journey as a Full stack engineer started at Synechron Technologies, Hyderabad, where over the span of more than two years, he rose from Technology Associate to Senior Technology Associate. At Synechron, he played a key role in full-stack development of a secure risk management web application for a major US-based BFSI client using Angular, SQL, C#, and CI/CD practices.

Subsequently after Synechron, at Cigniti Technologies which is now acquired by Coforge; Karteek worked as an AI Services Consultant within the Offerings Management Group and the Pre-Sales team. He led AI-centered initiatives in healthcare and industrial IoT domains. He provided tailored solutions, handled strategic account mining, built defense decks, and ensured alignment of technical solutions with business objectives. His role involved client-centric innovation, trend research, and delivery of AI technologies integrated into operational workflows.

Academic Qualifications

His latest degree is in Master of Science in Computer Science (Artificial Intelligence) at Illinois Institute of Technology, Chicago, Illinois (2023–2025)

Prior to that he has a Master of Business Administration in AI/ML & Finance – Woxsen University, Hyderabad (Graduated: 2022)

As he completed his Bachelors of Technology in Mechanical Engineering at JNTUK Kakinada (Graduated: 2016)

Karteek's Technical skill stack include Programming using Python (NumPy, Pandas), SQL, JavaScript, TypeScript, C#, MS SQL, react.js, CSS, HTML. **His skills in AI/ML include** understanding and the ability to build and utilize Neural networks, Clustering, Classification, Regression, Transformer models, Reinforcement Learning (DDQL) algorithms. **He is keen at NLP** and has worked on projects that include utilizing Sentiment analysis, Text summarization, GPT fine-tuning, BLEU/ROUGE/Perplexity metrics, Word2Vec, TextBlob, NLTK. **To complement his abilities as a ML engineer he also learned to Visualize data where he learned to use tools like** Tableau, Power BI, Matplotlib, Seaborn, ggplot. **He has also learned some Data Engineering skills involving:** AWS pipelines, graph-based processing and feature engineering. **He also possesses skills in Computer Vision** and can perform tasks like Object detection, facial recognition, real-time video analysis and much more. **Tools:** Git, CI/CD pipelines, Power Vision (for HMI)

Karteek has implemented multiple Professional, Personal and Academics projects, which are:

Flood Prediction using Transformer Models, AI Stock Trading Agent, Kar_Per, which is a personal chatbot, A Personal website, Human-Machine Interface (HMI) for EcoCar EV Challenge. A detailed description for each of his projects is as follows:

Flood Prediction using Transformer Models: Karteek has been a critical part of the development of an AI-based flood risk predictor using satellite imagery, transformer ML models, and geospatial data to help urban planners prepare mitigation strategies. This project earned 3rd place in the Grainger Computing Innovation Prize at Illinois Tech and has won his team a cash prize of \$5000. The project enabled him to work with GIS data for the first time and that experience was later on used to implement one of his Academic projects for a course named Online Network and Social Media Analysis.

AI Stock Trading Agent is one his Machine learning projects for school where he Designed a Double Deep Q-Learning agent that used LSTM networks to identify trading patterns in TCS stock from the Indian stock market. To build an agent that made profits from trading he created multiple custom reward-based environments that were put in to trial and error to find the most optimize reward function that can trade and make profit. Although the project is a Reinforcement Learning based, he still implemented some constraints to make the agent guess less and limit the actions it can take to make a profitable trade.

Eco-Car Challenge - Human-Machine Interface (HMI): Until his final semester in college Karteek was a part of the Eco Car EV challenge, a competition where selected teams from universities across the country compete with each other to build an autonomous driving vehicle. Karteek's role in the team was to build interactive HMI screens using Power Vision, a tool specifically designed to develop and implement functions on the screen which we were using, which was sponsored by UICO. Along with that his duties also included Integration of car-to-screen communication via CAN bus and custom DBC files. And designing Real-time control logic and state flows while aiming to improve vehicle-user interaction.

Kar_Per, which is a personal chatbot is his recent project that he built to showcase his interest in natural language processing. Kar_Per is a chatbot he named after him meaning Karteek Pericharla. The project is a part of creating his portfolio to showcase his skills on the internet. The chatbot has been built on top a base LLM name Mistral, which is an LLM with 24 Billion parameters approximately. He took a RAG based approach to implement the bot along with Langchain and Pytorch in his toolstack. The bot is going to be in continuous development along with time.

A Personal website is another project of his, which is a Personal website in which the chatbot KarPer has been integrated into. He has built the website from scratch using React and Node js, along with CSS Python to run his Fast API calls. The entire setup has been planned to host on Azure or Amazon Web services, creating a end-end project which consists of developing, build, integration and deployment of both his website along with his Chatbot model.

Varma's other projects include **NLP Data Mapping at Course5 Intelligence**: Created NLP algorithms for cleaning and mapping web-scraped records, streamlining data retrieval while maintaining high accuracy. and **Investor Abnormality Detection Tool**: Built a desktop application using financial models to detect discrepancies in company financials using historical fraud patterns

Interests & Personality Highlights

Beyond academics and work, Karteek has been a passionate Kabaddi player, representing and leading his college team for four years. He is known for his leadership skills, event organization experience, and collaborative spirit. He is highly enthusiastic about emerging AI technologies, especially in generative models (both NLP and CV), big data applications, and creating impactful AI-driven systems.

General Information:

Beyond the scope of any information provided here, any question asked should be politely rejected mentioning that the question is out of scope and not enough information is available.