

VAMSI KRISHNA MARAM

Fairfax, Virginia, United States

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EDUCATION

George Mason University

Jan 2024 – Dec 2025

Master of Science in Computer Science, (CGPA: 3.56)

Fairfax, VA

Relevant Coursework: Data Science, Web Development, Software Development, Databases

University College of Engineering Kakinada, JNTU-Kakinada

Jul 2019 – Apr 2023

Bachelor of Technology in Computer Science and Engineering, (CGPA: 3.2)

Kakinada, India

Relevant Coursework: Machine Learning, MERN Stack, Data Structures, OOPS

WORK EXPERIENCE

Machine Learning Research Assistant

Jul 2022 – Apr 2023

University College of Engineering Kakinada

Andhra Pradesh, India

- Developed and implemented a smart traffic signal control system using deep reinforcement learning, incorporating techniques like Deep Q-Learning and Convolutional Neural Networks (CNNs) to optimize traffic flow at intersections.
- Built a simulation environment to generate and analyze traffic patterns, trained models on real-time traffic data to dynamically adjust signal timings, significantly reducing vehicle wait times, fuel consumption, and pollution.
- Evaluated the model's performance against traditional fixed-time systems, demonstrating enhanced traffic efficiency through machine learning, with comprehensive testing and tuning of hyperparameters for optimal results.

Trainee Software Engineer

Jun 2022 – Aug 2022

Future Ready Talent (Microsoft)

Andhra Pradesh, India

- Orchestrated the deployment of a static web application on Microsoft Azure, reducing deployment time.
- Utilized Azure cloud services for resource optimization, improving project scalability and efficiency.

PROJECTS

Data Exploration on Sports Team Performance — *Python, Pandas, NumPy, Power BI*

- Scraped and cleaned extensive cricket player performance data using Python, transforming raw scorecards and player statistics into structured datasets. Applied data wrangling techniques to ensure accuracy.
- Built interactive Power BI dashboards to visualize team performance trends, player efficiency, and specific role-based metrics such as strike rates and economy rates.

StayFinder Platform — *Node.js, Express.js, MongoDB, Mapbox API, Cloudinary API*

- Created a MERN stack hotel searching platform, integrating mapping functionality with Mapbox API.
- Implemented secure user authentication with Passport.js and managed role-based permissions for hotel listings.

Kubernetes Cluster Project — *Kubernetes (Minikube), Docker, Maven, Git, kubectl, AWS*

- Set up a Kubernetes cluster using Minikube on an Amazon Linux 2 EC2 instance to deploy Java-based microservices packaged into Docker containers.
- Implemented an end-to-end deployment pipeline for microservices architecture.

SKILLS

Programming Languages: Python, SQL, C++, JavaScript, TypeScript, HTML/CSS

Data Science Tools: Pandas, NumPy, Scikit-learn, TensorFlow, Keras, Power BI

Web Development: React, Node.js, Express.js, MongoDB, Firebase, REST APIs

Cloud DevOps: Microsoft Azure, AWS, Docker, Git, GitHub

Soft Skills: Problem-solving, Presentations, Collaboration, Data-driven decision making

LEADERSHIP & INVOLVEMENT

Organized the AI Thought Leadership Summit, uniting industry leaders to discuss advancements in digital infrastructure.

Organized technical workshops and events, enhancing skills and fostering a collaborative community for college students.

Captained the cricket team of the Computer Science Department and won the tournament in the final.

Managed event planning, sponsorship acquisition, promotional activities, driving record participation for Zeitgeist'23.