

VAMSI KRISHNA MARAM

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EDUCATION

George Mason University

Master of Science in Computer Science, (CGPA: 3.7)

Jan 2024 – Dec 2025

Fairfax, VA

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

University College of Engineering Kakinada, JNTU-Kakinada

Bachelor of Technology in Computer Science and Engineering, (CGPA: 3.8)

Jul 2019 – Apr 2023

Kakinada, India

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

WORK EXPERIENCE

Machine Learning Research Assistant

Innovation Research Center (UCEK)

Jul 2022 – Apr 2023

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

Future Ready Talent (Microsoft)

Jun 2022 – Aug 2022

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

Transcribe — React, Flask, SpeechRecognition, Pydub

- Spearheaded the development of Transcribe, a React and Python-based transcription service, integrating React 5+ Custom Hooks and Axios for a dynamic user interface and efficient API communication.
- Implemented secure authentication and authorization using JWT and OAuth 2.0, ensuring robust security measures for user data and seamless third-party login functionality.
- Leveraged Google Cloud Speech-to-Text API and SpeechRecognition, Pydub libraries for high-accuracy audio to text conversion, supporting 20+ languages and multiple audio formats, achieving a 95% accuracy rate.

Social BERTerfly — Keras, Flask, HTML/CSS, Twitter API

- Designed a decentralized insurance platform using Chainlink API to interface with OpenWeatherMaps and decide premium amounts by user location.
- Implemented a streaming premium payment service using SuperFluid and deployed on the Polygon network.

Tooney Tunes — Phaser, JavaScript, Spotify API, Node.js, melody.ml

- Developed a Phaser.js platformer game that dynamically generates levels based on Spotify track analysis, synchronizing gameplay with music tempo and beats.
- Integrated Spotify API for user authentication and playlist access, with melody.ml to decompose songs into components affecting gameplay and visual elements.

SKILLS

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

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

Web Development: React, Next.js, 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