

Koushik Vasa

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SUMMARY

Creative AI/ML Engineer with a specialized Master's, blending advanced machine learning and Generative AI with hands-on frontend development in Vue.js and React. I build robust, full-stack AI solutions, from intuitive user interfaces to accurate predictive models. Seeking to apply my expertise, developing AI agents for complex data-driven problems.

EDUCATION

George Mason University

Jan 2024 - Dec 2025

Master's in Computer Science, Machine Learning. GPA:3.85

SRM University AP, India

Jun 2019 - May 2023

Bachelor of Technology in Computer Science and Engineering, Machine learning. GPA:3.6

PROJECTS

MediConnect: AI-Powered Healthcare Platform

- Engineered a full-stack AI platform matching patients to **2.8M+ providers** in **<500ms** by optimizing a **704MB** dataset with custom stream processing.
- Integrated Google Gemini to power a clinical academy with **70+ case studies** and **20+ 3D models**, enhancing diagnostic support and medical education

Predicting Hospital Readmissions for Diabetic Patients

- Developed a machine learning model to predict 30-day hospital readmissions for diabetic patients using a dataset from the **UCI Machine Learning Repository** with over 100,000 patient records.
- Utilized Principal Component Analysis (PCA) to improve model performance, resulting in a **9% increase in accuracy** for the Decision Tree model, from 44% to 53%

CitationSleuth: Fact-Checking RAG System

- Developed a RAG verification system using a **dual-layer strategy** (Semantic Similarity & Neo4j Graph) to detect LLM hallucinations across **1,000+ HaluEval benchmark** samples.
- Built a transparent **Streamlit** interface that flags unsupported claims in real-time, improving generative AI reliability by enforcing **0.7+ semantic similarity** thresholds.

EXPERIENCE

Cyware Labs Pvt Ltd

Jan 2023 - Aug 2023

Software Engineering Intern

- Developed and maintained user interfaces using Vue.js, which enhanced application responsiveness and improved the user experience by migrating the product from **Vue 2 to Vue 3** and ensuring a seamless, responsive design.
- Ensured optimal operational efficiency by proactively troubleshooting and resolving over **150 bugs** in 8 months, leading to a more stable and reliable product.
- Contributed to cross-functional teams by collaborating with product and design to implement new features for the company's website and core product, while optimizing existing code for better performance.

Department of Innovation and Entrepreneurship, SRM University AP

Dec 2020 – Dec 2022

Technical Lead – Innovation Cell

- Mentored **10+ student teams** on **AI/ML implementation** and full-stack prototyping, directly facilitating the launch of **4 campus startups** and boosting technical engagement by **30%**.
- Spearheaded the digital transformation of the incubation center by architecting a resource management portal, streamlining workflow for student ventures and reducing administrative latency by **40%**.
- Led outreach and marketing initiatives to promote the department's work, securing **7 industry partnerships** that provided students with valuable mentorship and technical resources.

SKILLS

- **Machine Learning:** NumPy, Pandas, Scikit-learn, Keras, TensorFlow, PyTorch, NLP, PCA, Decision Trees, AI agents
- **Programming:** Python, Java Script, SQL, C, Java, Git, Data Structures and Algorithms
- **Gen AI:** Hugging Face, RAG, Fine-Tuning, LLMs, GANs, Prompt Engineering
- **Cloud:** Azure, AWS
- **Web Development:** HTML, CSS, Vue Js, React JS, REST APIs, Figma
- **No-Code & Low-code Tools:** Dialogflow, Bubble, Pega GenAI, Canva, N8n

CERTIFICATIONS

- **Oracle Cloud Infrastructure 2024 Certified AI Foundations Associate:** Oracle | Issued Oct 2024
- **Academy Accreditation - Generative AI Fundamentals:** Databricks | Issued Aug 2024
- **Gen AI Foundations:** Dell Technologies | Issued Sep 2024
- **Career Essentials in Generative AI:** Microsoft and LinkedIn | Issued Jul 2023
- **Prompt Engineering for Everyone:** IBM | Issued Aug 2024
- **Data Science & Analytics:** HP | Issued Oct 2024
- **Full-Stack Web Development with React Specialization:** Coursera | Issued Jun 2022

ACHIEVEMENTS

- Won the azure ai challenge conducted by hack overflow hackathon at GMU.
- Won Smart City Hackathon Conducted by SRM University AP.
- Secured an award for perfect GPA in high school.