

RAHUL TALLAM

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EDUCATION

Arizona State University, Tempe

Aug 2024 – May 2026

Master of Science in Computer Science

GPA: 4.0/4.0

- Coursework: Statistical Machine learning, Data Mining, Cloud Computing, Data Visualization, Software Verification & Testing.

Vellore Institute of Technology, Vellore

Sep 2020 – May 2024

Bachelor's in Computer Science and Engineering (Information Security)

GPA: 3.6/4.0

- Coursework: Artificial Intelligence, Design and Analysis of Algorithms, Expert Systems, Cyber Security, Database Systems, Block Chain.

TECHNICAL SKILLS AND CERTIFICATIONS

Programming: Python, Java, C/C++, JavaScript; **DBMS**: MySQL, PostgreSQL, MongoDB; **OS**: Linux, macOS, Windows.

Web development & Microservices: HTML, Tailwind CSS, React.js, Next.js, Node.js, Django, FastAPI, RESTful APIs, WebSocket, Bootstrap.

Cloud & DevOps: Amazon Web Services, GCP, Azure, Docker, Kubernetes, Google Kubernetes Engine, Git, Jenkins, CI/CD.

AI/ML: Generative AI, LLMs, RAGs, PyTorch, TensorFlow, Scikit-learn, NLP (Transformers), OpenCV, Pandas, Reinforcement Learning.

PROFESSIONAL EXPERIENCE

Open Gig, Software Development Intern

Nov 2024 – Jun 2025

- AI-Driven Voice Agent – Contributed to the development of an AI-driven agent by integrating speech-to-text and text-to-speech APIs with backend services and Twilio telephony, enabling automated call handling and improving user interaction.
- Built FastAPI endpoints, reducing inference latency by ~30% (from 500ms to 350ms) and improving overall system performance.
- Virtual Cloth Try-On – Developed a generative AI pipeline for virtual cloth try-on, leveraging FLUX LoRA for model generation and diffusion-based CAT-VTON to overlay products onto AI-generated human images, reducing manual adjustments by 30%.
- Engineered an Agentic AI-powered marketing copilot using OpenAI's API and Vercel's AI SDK to autonomously generate campaign hooks, captions, and CTAs, cutting content creation time by ~40%. Containerized the entire pipeline with Docker and deployed on Azure Container apps, enabling scalable cloud execution and integrating with a React-based dashboard for seamless content management.

Kopen Software Solutions, Software Development Intern

Jan 2024 – May 2024

- Collaborated with backend engineers to design and implement a Python-based chatbot leveraging transformer architecture, reducing manual support by 35% and improving response speed by 20%.
- Coordinated with cross-functional team members to orchestrate RESTful APIs backed by MySQL, applying query indexing and revamping data workflows to reduce server latency by 15%.

SmartInternz, Software Development Intern

May 2023 – Jul 2023

- Built a full-stack food ordering application using ReactJS and Spring boot, achieving a 25% decrease in load times and improving data retrieval.
- Containerized the application with Docker and orchestrated using Kubernetes, ensuring high availability and efficient scaling. Collaborated on CI/CD pipelines, streamlining development workflows and cutting deployment time by 40%.

PAPER PRESENTATIONS

Convergence of Blockchain and IoT, Springer - 2023 ICDSMLA

Oct 2023

- Led research on IoT security challenges and proposed blockchain-based solutions for decentralized, encrypted machine-to-machine transactions, enhancing privacy and resilience; presented findings at Springer ICDSMLA 2023.

PROJECTS

Learning Management System

- Conceptualized an interactive MERN based LMS with 10+ core modules (auth, course creation, Stripe payments), enabling seamless delivery.
- Integrated AI features - Whisper for video transcription, GPT-4 for summarization, and an LLM-based doubt-solving agent; reducing manual notetaking by 80% and improving query resolution speed by 70%.

Fraud Detection in Banking Data using Ensemble Techniques

- Evaluated ML models, including LightGBM, XGBoost, CatBoost and Stacking Classifier, to determine the most effective approach to handle an imbalanced credit-card dataset and included Bayesian Optimization for hyperparameter tuning, enhancing model accuracy by 10%.
- Engineered a Flask-based web interface for real-time model interaction, providing intuitive navigation and enhanced user experience.

Comparative AI-Trip Planner Web Application

- Developed an AI-powered trip planner using React.js, Gemini API, and Firebase, generating personalized itineraries and hotel suggestions, cutting manual planning effort by 60% and deployed on Vercel with serverless architecture.