

PRAKASHRAJ NEHRUDASS

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Education

University of Southern California, United States

Aug 2023 - May 2025

Master of Science, Computer Science

Easwari Engineering College, Anna University, India

Aug 2019 - May 2023

Bachelor of Engineering, Computer Science & Engineering

Work Experience

Sony Pictures Entertainment

Oct 2024 – Dec 2024

AI Engineer Intern

Culver City, United States

- Developed an AI-powered email agent that collects AWS cost data, stores it in Azure SQL, and triggers an OpenAI LLM with custom plugins via Azure Function App. Using Azure Communication Services, it composes and sends automated notifications to data scientists, streamlining cost tracking and reducing manual effort and expenses.
- Enhanced the speech functionality of Sony Pictures' chatbot with custom plugins to extend agent capabilities. Designed and developed MLOps pipelines with AWS, Azure, Terraform, and Jenkins to deploy data science applications for broader business use. Collaborated with the data science team to resolve a critical bug and support production deployments.

Radical AI

May 2024 – Jul 2024

Software Engineer intern

Remote, United States

- Engineered and maintained a full-stack solution with a robust backend using Python, FastAPI, and PostgreSQL, optimizing API performance and improving query execution speed by 20%. Containerized applications with Docker and managed scaling with Kubernetes, enhancing deployment efficiency, system reliability, and uptime.
- Developed a responsive frontend using ReactJS, HTML, CSS, and Tailwind, improving user interaction by 10%. Collaborated closely with the design team to integrate modern UI/UX practices, ensuring a seamless and user-friendly interface.

Coding Zen

Aug 2021 – Oct 2022

Software Engineer - Machine Learning intern

Remote, India

- Developed and deployed an AI-powered digital assistant for kindergarten students. This application leveraged computer vision and natural language processing to enable interactive learning experiences through vision and speech recognition. Increased student engagement by 20% through personalized learning activities, as evidenced by user feedback.
- Improved learning outcomes by 15% by utilizing AI-powered personalization, measured by standardized test scores. Gained practical experience in integrating AI technologies into real-world applications, including infrastructure management and deployment.

Projects

Crowd control and monitor system

Dec 2024

- Implemented a system to capture real-time audio and images from Android phones using Termux Python scripts. Data was sent to an agent hosted in AWS EC2 to predict crowd flow and member count, generated summaries using OpenAI endpoints stored in a Pinecone database.
- Developed a chatbot web application using Next.js, React, and Tailwind CSS for querying about crowd flow in the location. The solution enables efficient crowd control and monitoring in large events, stores, and public spaces, ensuring better management and decision making.

Coustme Recommender

May 2024

- Developed and deployed an AI-powered web application for personalized outfit suggestions, training custom ML models to recommend fashion based on body shade, size, and shape. Implemented backend using Java, Spring Boot, PostgreSQL for user data, and MongoDB for chat storage.
- Hosted the ML model as an AWS Lambda function, enabling seamless communication via RESTful APIs between the app in ECS, Lambda, and OpenAI. Ensured efficient scalability and integration for delivering personalized and dynamic fashion recommendations.

Technical Skills

Programming Languages/ Databases: Python, R, Java, JavaScript, C, C++, HTML/CSS, Swift, Go, MySQL, MongoDB, Google BigQuery, Apache Spark, Apache NiFi.

Software Development & Frameworks: FastAPI, Spring Boot, ReactJS, Tailwind, NGINX, Redis, WebSockets, RESTful APIs, Celery, RabbitMQ, Elasticsearch, GraphQL, PyTorch, TensorFlow, JAX.

Development Tools & Version Control: Microsoft Azure, Amazon Web Services (AWS), GitHub, GitLab, Docker, Kubernetes, Jenkins, Terraform, CUDA, Semantic kernels.

Specializations: Software Engineering, Machine Learning, Natural Language Processing, Computer Vision, Database System, Web Technologies, DevOps, Cloud Computing

Certification: Microsoft Certified: Azure AI Fundamentals.