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

Radical AI **May 2023 – Present**

AI Engineer *Remote, Unites States*

- Built an ML pipeline using Langchain to extract and process YouTube video content, resulting in a 20% improvement in data accuracy over previous methods. Implemented advanced text embedding models to transform processed content into vector embeddings, enhancing semantic understanding and facilitating efficient retrieval.
- Developed a Retrieval Augmented Generation (RAG) system utilizing similarity search on vector embeddings based on user prompts. This resulted in a 10% increase in relevant response accuracy. Refined responses through the integration of a GPT model, achieving a 5% improvement in response fluency and coherence.

IBM iX **Aug 2022 – Nov 2022**

Data Scientist Apprenticeship *Chennai, India*

- Analyzed a dataset of 100,000 user reviews on UI/UX design of IBM iX products, encompassing 20 distinct design variations. Employed statistical analysis and Power BI for data visualization, generating actionable insights to inform product development and marketing strategies.
- Developed a Random Forest model to recommend optimal UI/UX designs based on client-specific use cases, resulting in a 15% increase in client satisfaction. Successfully deployed the recommendation model on the IBM Cloud, enabling efficient and scalable access for stakeholders.

Coding Zen **Jun 2021 – Aug 2021**

MLE 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

Recommendation System using LLM **May 2024 - Present**

∗ Developed and deployed a content recommendation system using Microsoft Azure AI and LLAMA 3, resulting increase in user engagement and rise in advertising revenue. Improved user experience: Leveraged Large Language Models (LLM) to analyze audio transcripts and video content, categorizing videos into clusters based on user preferences (e.g., sports, Cinema, etc.,). Implemented a trial method to suggest similar clusters, increasing user engagement by 15%.

∗ Enhanced targeted advertising: Utilized Optical Character Recognition (OCR) to extract text information and also used face api to detect faces, enabling the recommendation of relevant advertisements based on flagged content.

∗ Content moderation: Implemented robust content moderation mechanisms, reduced 18+ content suggestions for children by 95% through implementation of robust content moderation mechanisms. This resulted in a safer and more family-friendly online community.

Costume designing using AI **Dec 2023 - Jan 2024**

· Developed and deployed an AI-powered web application for personalized outfit suggestions using user-uploaded photos and occasion input. Improved accuracy of outfit recommendations by 50% through the integration of PyTorch for image recognition and GPT for natural language processing.

· Built a scalable and reliable RESTful API with Django and MongoDB. Enhanced user experience by implementing real-time data updates,improving recommendation algorithms and providing dynamic suggestions based on user preferences.

Technical Skills

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

Machine Learning & Data Science Tools: PyTorch, TensorFlow, Scikit-Learn, Matplotlib, Seaborn, NLTK, spaCy, Transformers, LangChain, PySpark, Hadoop.

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

Specializations: Machine Learning, Deep Learning, Natural Language Processing (NLP), Data Science & Analytics,Software Engineering.

Certification: Microsoft Certified: Azure AI Fundamentals.