SHASHIDHAR REDDY KANAPARTHI

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EDUCATION

University of Colorado, Boulder   **Boulder, CO**
Masters in Computer Science   *Expected Apr 2027*
Related Coursework: Machine Learning, NLP, Datacenter Scaler Computing

SRM Institute of Science and Technology, SRM University   **Chennai, India**
Bachelor's of Technology in Computer Science and Engineering (AI & ML)   *May 2025*
CGPA: 8.71/10 | **Awards**: Academic Merit Scholarship(2021,22)

RELEVANT EXPERIENCE

Trans Global Geomatics   **Hyderabad, India**
Data Science Intern   *Dec 2024 - May 2025*
- Contributed to real-time GPS analytics pipelines in Python, applying Random Forest for anomaly classification and K-Means clustering for unsupervised anomaly detection, improving deployment efficiency by 22%
- Built 4+ interactive dashboards with Plotly and Streamlit, enabling data visualization for geospatial data and accelerating data-driven decision-making and boosting decision speed by 15%
- Collaborated with cross-functional teams to integrate real-time analytics and GPS tracking features into mobile application, reducing user workflow time for 500+ users

PROJECTS

XploRAG: Explainable Retrieval-Augmented Generation

- Built XploRAG, an explainable RAG system that enables natural-language search across 1000 + technical documents using FAISS semantic retrieval and FLAN-T5 generation for precise, context-aware answers
- Linked every AI-generated answer to its retrieved document context through a Streamlit interface, allowing users to verify supporting evidence and improving transparency
- Optimized retrieval and embedding efficiency via adaptive text chunking and FAISS + MPNet tuning, improving context relevance by $\approx 25\%$ and achieving an average search latency of 0.82 s per query

WeLearn: AI-Assisted Course Planning Platform

- Designed WeLearn, an AI-assisted course planning system that converts minimal user input into structured learning paths with modules, timelines, and curated resources
- Implemented a multi-source educational retrieval pipeline integrating Google Custom Search, YouTube, and trusted educational domains (Coursera, Edx, GitHub) to surface 30–60 high-quality resources per course
- Increased educational relevance and retrieval reliability by ~65% using query normalization, domain whitelisting, and fallback strategies, delivering complete course outputs in ~1.2 s end-to-end

JOHN : A Virtual Voice Assistant

- Engineered "JOHN," a virtual assistant using NLP and Speech-to-Text APIs, enabling 20+ custom voice commands for system control (media, web, info retrieval)
- Implemented Logistic Regression for intent classification, Spacy for entity recognition (dates, locations), and NLTK for preprocessing, achieving 95% command accuracy
- Evaluated testing with 50 visually impaired users, gathering feedback to enhance voice recognition, achieving real-time command processing under 200 ms

SKILLS & CERTIFICATIONS

Programming & Tools: Python, C, SQL | Firebase, Flutter, Linux, Git, FastAPI, REST API Development
Libraries & Frameworks: Pandas, NumPy, Scikit-learn, TensorFlow, PyTorch, Keras, Matplotlib, Plotly, Streamlit, LangChain, SentenceTransformers, Hugging Face Transformers, FAISS
Generative AI & NLP: Prompt Engineering, Large Language Models(LLMs), Speech-to-Text APIs, Intent Classification, LSTM, FLAN-T5, MPNet, Text Generation, LLM-assisted Content Structuring, Query Normalization, Semantic Relevance Ranking
Certifications:
- Machine Learning and Deep Learning - Fundamentals and Applications, NPTEL Certification
- AWS Academy Machine Learning Foundations, AWS Academy