

Karnati Sai Prashanth

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WORK EXPERIENCE

Centennial Ridges Corporation

Machine Learning Engineer Intern • Internship

- Served as a Prompt Engineer, optimizing GPT-3.5 models for data extraction from the database, achieving a 50% reduction in processing time and enhancing user experience.
- Utilized SQL queries to validate and cross-check GPT-generated data with original datasets, ensuring accuracy and consistency.
- Developed and implemented a user-friendly dashboard, facilitating seamless interaction between user queries and GPT generated outputs.

EDUCATION

Masters in Data Science

State University of New York at Albany

Albany • 08/2024 - Present

Undergraduate in Artificial Intelligence

Amrita Vishwa Vidyapeetham • GPA: 8.12

Coimbatore, India • 08/2020 - 04/2024

SKILLS

Machine Learning : NLP, SK-learn, TensorFlow, Transformers

Data Visualization: Matplotlib, PowerBI, Tableau

Cloud Technologies: AWS, Azure

PUBLICATIONS

Bridging Language Barriers: Exploring Hindi-to-English Speech-to-Speech Translation for Multilingual Communication

09/2023

Springer Nature Singapore

Developed a translation system with a **3.8 MOS**, improving accuracy by **15%** using Wave2Vec2 and transformers, facilitating real-time communication for over **400 million** Hindi speakers.

Enhancing Telugu Part-of-Speech Tagging with Deep Sequential Models and Multilingual Embeddings

20th International Conference on Natural Language Processing

Achieved **88.12% F1 score** for Telugu POS tagging using stacked **LSTMs** and **multilingual BERT** embeddings, improving accuracy by **12%**, advancing NLP for low-resource languages.

CERTIFICATIONS

Azure AI Fundamentals

06/2023 - Present

Microsoft

Azure Data Fundamentals

06/2023 - Present

Microsoft

VOLUNTEERING & LEADERSHIP

UNESCO

07/2022 - 07/2023

Team Leader

- Collaborated with a team on a UN-supported rural development project in Rural parts of India.
- Trained in **Participatory Rural Appraisal (PRA)** and **Human-Centered Design (HCD)** to assess community challenges.

- Collected and analyzed data from over **50** households to design solutions focused on clean water access and sustainable development.

PROJECTS

Parts of Speech Tagging in Telugu Using Generative Pre-Trained Models 05/2024

- Utilized large language models (LLMs) to implement Telugu-specific Parts of Speech (POS) tagging, overcoming challenges posed by limited annotated data.
- Achieved a 98.01% accuracy rate in Telugu POS tagging through innovative methods such as Mixtral.
- Contributed to advancements in natural language processing (NLP) for under-resourced languages, driving improved linguistic analysis and model performance.

Sales Dashboard | Power BI Desktop 02/2024

- Utilized data analysis techniques, with a focus on time series analysis, to provide insights and precise sales forecasting using DAX queries, and developed interactive dashboards with Power BI Desktop.

Voice and Message Based Home Automation 07/2022

- Developed an IoT-based home automation system using Raspberry Pi, reducing manual control efforts by 60%.
- Integrated voice recognition, enhancing user convenience by 30% through hands-free operation.
- Implemented a Telegram bot, resulting in 25% faster remote control response and real-time notifications.
- Enabled real-time data integration, improving system monitoring accuracy by 35%.