KARNATI SAI PRASHANTH

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ABOUT ME

I'm a technical enthusiast with a growing interest in data science and a deep passion for artificial intelligence.I started my journey because I was really intrigued by how AI could change things for the better. Over time, my focus has shifted towards using data and AI techniques to solve difficult problems. With a solid foundation in machine learning, statistics, and Natural language processing, I am committed to exploring the vast possibilities of AI and data science to drive innovation and deliver impactful solutions.

EDUCATION

B.Tech - Computer Science And Engineering (Artificial Intelligence)

Amrita Vishwa Vidyapeetham

🗓 2020 – Ongoing   ⚲ Coimbatore, India

CGPA : 8.08

Higher Secondary Education

FIITJEE Junior College

🗓 2018 – 2020   ⚲ Visakhapatnam, India

CGPA : 9.36

Secondary School

The Presidential School

🗓 2018   ⚲ Visakhapatnam, India

Percentage : 86

TECHNICAL SKILLS

- **Programming:** Python, R, Matlab
- **Packages:** NumPy, Pandas, TensorFlow, SK-learn.
- **Data Visualization:** Matplotlib, Seaborn, PowerBi
- **Mathematics:** Linear Algebra, Statistics, Calculus
- **Database:** MySQL, MongoDB
- **Cloud Platforms:** Azure, AWS

CERTIFICATIONS

🗓 Issued 2020 - 2023

- Data Science Virtual Experience Program - British Airways
- Microsoft Certified: Azure Fundamentals
- Microsoft Certified: Azure Data Fundamentals
- Microsoft Certified: Azure AI Fundamentals

PROJECTS

Voice and Message Based Home Automation

🗓 Jul 2022

I developed an IoT-based home automation system using a Raspberry Pi. This system includes voice recognition, a Telegram bot, and real-time data integration, all designed to provide a user-friendly experience.

Bridging the Language Gap: Empowering Hate Speech Detection with Pervasive Attention on Dravidian Languages

🗓 Jul 2023

This project addresses hate speech detection in code-mixed Dravidian languages, specifically Tamil, using pervasive attention and the random kitchen sink (RKS) method, achieving an accuracy of 77.4

Predicting International Carbon Dioxide and Greenhouse Gas Emission Levels with Dynamic Mode Decomposition

🗓 Jan 2023

Employed DMD to accurately predict CO_2 and GHG emissions from a 37-country annual dataset, with discrete DMD for CO_2 reconstruction and continuous DMD for GHG prediction, yielding reliable estimates for future emissions.

Matrix Factorization for Predicting the Movie Rating

🗓 Aug 2022

Implemented Matrix Factorization and Collaborative Filtering for movie rating prediction, considering genre and favorite actors/actresses to enhance accuracy while handling missing ratings.

Data-Driven Student Achievement Analysis and Machine Learning Deployment in AWS with CI/CD Integration

🗓 Jul 2023

Utilized Machine Learning on Portuguese school datasets encompassing student grades, demographics, social factors, and school-related features, then deployed the model on AWS with CI/CD Integration.

TECHNICAL INTERESTS

Machine Learning   Data Analysis

Natural Language Processing

Speech Processing

PUBLICATIONS

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

📅 01-08-2023

Accepted at 4th Congress of Intelligence Systems 2023
Developed a structured Hindi-to-English S2S translation model with STT, text translation, and TTS modules, achieving an average MOS of 3.8, addressing language barriers for effective multilingual communication in India.

Loan Distribution System Using Supervised Machine Learning.

📅 07-07-2023

Accepted at IJSREM
This project involves a machine learning algorithm for loan approval, aiming to automate eligibility determination based on customer details, including gender, marital status, education, income, and credit history, with a focus on binary classification, ultimately benefiting retail banks by saving time.

Towards a More Inclusive Telugu Internet: Creating Corpus and Developing Models to Detect Hate Speech in Telugu Code-Mixed Social Media Text

📅 Under Review

This paper presents machine learning and deep learning models for detecting hate speech in Telugu-English code-mixed social media text data, addressing challenges in sentence complexity and low-resource language settings, achieving optimal performance with distilbert-based features.

Exploring Current Transformer-Based Models in Speech Processing Tasks: A Concise Review

📅 Under Review

This paper explores advancements in speech processing, focusing on transformer-based techniques like Conformer models, and provides a comprehensive comparison of AI-based methodologies to guide further research in the field.

EXTRA - CURRICULAR ACTIVITIES

- Central Co-Ordinator for the events GOKULASTAMI and AMRITAOSTAVAM.
- Head of the Drones Team for the ANOKHA Technical Event.
- Elected as the Class and Cultural Representative for my branch.

INTERNSHIPS

Machine Learning Engineer Intern
Centennial Ridges Corporation

📅 july 2023 - OCT 2023

As a Machine Learning Engineer Intern at Centennial Ridges Corporation, I applied advanced ML and Prompt Engineering techniques to real-world projects, contributing to the development of cutting-edge solutions and gaining valuable hands-on experience in the field.

VOLUNTEER CONTRIBUTIONS

LIVE-IN-LABS®

📅 Feb 2023 - Dec 2023   📍 Rampura, Haryana

Participated in the Live-in-Labs® Program in rural Mahendragarh district, Haryana, as part of a sustainability development initiative by Mata AmritAnandamayi Math and The United Nations. In a team of six, we underwent training in tools like Participatory Rural Appraisal and Human Centered Design to identify and address challenges faced by the community of Rampura. The collected data is being analyzed to construct a proposed developmental project.

LANGUAGES

- Telugu
- English
- Hindi
- Tamil

PERSONAL DETAILS

- **Date Of Birth:**
  16th March 2002
- **Hobbies:**
  Swimming, Playing Video Games