NEELI SOUMYA

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OBJECTIVE

BTech student at IIT Dharwad with a strong foundation in AI/ML, NLP, and deep learning. Passionate about applying cutting-edge techniques in natural language processing and computer vision to solve real-world challenges through research-driven AI solutions.

EDUCATION

Indian Institute of Technology, Dharwad, Karnataka	Expected 2026
Bachelor of Technology, Computer Science.	CPI: 8.21
Sri Chaitanya Junior College, Hyderabad, Telangana	2020 - 2022
Class 12th in PCM.	Percentage: 97.6%

TECHNICAL SKILLS

Programming Languages	Python, C, C++, LaTeX
Developer Tools	VS Code, Git, Jupyter Notebook, gedit, Eclipse, Colab
Frameworks & Libraries	Scikit learn, Tensorflow, OpenCV, Tkinter, Pandas, Numpy, PyTorch
Soft Skills	Leadership, Teamwork, Decision-making, Time management, Public Speaking

RESEARCH INTERESTS

Research & Development Project in NLP (Under Prof. Dileep A D) Aug 2024 - Present

- **Improved Feature Representation:** Enhanced a prebuilt audio language detection model by replacing MFCC features with Wav2Vec2 embeddings, improving the quality of feature extraction and representation.

- **Applied Meta-Learning and Few-Shot Learning:** Implemented meta-learning and few-shot learning techniques to extend the model's capability for low-resource languages, enabling efficient language detection with limited training data.

EXPERIENCE

Text Analysis Based Research Intern (Under Prof. Animesh Chaturvedi) May 2024 - Aug 2024

- **Contributed to NLP Research:** Conducted research on the Bhagavad Gita text by collecting, tokenizing, and translating it into multiple languages to enable cross-linguistic analysis and publication in a reputable journal.

- **Phonetic and Semantic Analysis:** Identified and classified phonetically similar words across languages, grouping them by sound and meaning to distinguish homophones and homonyms.

PROJECTS

Academic Projects

- **Developed AI-driven NLP models:** Chatbot (GPT-4), spell-checker, transliteration, and Naïve Bayes classifier.(Check here)

- **Built predictive ML models:** Job outcome, weather forecasting, and hotel reservation predictions.(Link)

- **Built compiler model:** Beginner level model with all phases of a compiler(Link)

Self Projects

- **NLP & AI Tools:** Developed a chatbot (GPT-4), spell-checker, multilingual transliteration, language translator, and a chatbot for filtered web searches.(Check here)

- **Machine Learning Models:** Built a loan predictor, spoken language identification (MFCC + SVM), fine-tuned LLMs (Mistral-7B), and developed interactive games like Tic-Tac-Toe & Hangman.(Check here)