Ganesh Kumar Tirunalla

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EDUCATION

•**Master of Computer Applications(Computer Science)** *2023-25*

St. Ann's College of Engineering & Technology ,Chirala CGPA: 7.9

PERSONAL PROJECTS

•**Cross-Attention Transformers for Multimodal Emotion Understanding in Human-Robot Interaction**

Developed a deep learning model to recognize human emotions from text, speech, and facial expressions.

– Used CNNs for image/audio processing and BERT for text analysis, integrating Cross-Attention Transformers for better accuracy.
– Trained on CMU-MOSEI and MELD datasets, achieving 88.4% accuracy in emotion classification.
– Technology Used: Python, TensorFlow, PyTorch,Hugging Face,AI assistants and robotics.

•**Log Classification System using Hybrid Classification Approach**

Developed a hybrid log classification system combining BERT, Logistic Regression, Regex, and LLM, improving classification accuracy.

– Deployed a FastAPI server to process log data via RESTful APIs, enabling seamless integration with existing systems.
– Improved log classification accuracy by 40% compared to rule-based systems and reduced operational costs by 30
– Technology Used: Python, FastAPI, Sentence Transformers, scikit-learn, and LLMs for efficient log analysis and classification.

•**Flask-based Notes Application**

Developed a web-based notes application using Flask, HTML, CSS, Python, and Jinja, enabling users to create, edit, and manage notes

– Implemented user authentication and database integration for secure and efficient storage of notes
– Technology Used : Flask,HTML,CSS,Python,SQLAlchemy and Jinja .

EXPERIENCE

•**Machine Learning Internship** *Dec 2024*

Datavalley Online

– Worked on machine learning models, including data cleaning, training, and evaluation.
– Used Python, Scikit-learn, and TensorFlow/PyTorch to build and test ML models.
– Improved model accuracy by tuning parameters and selecting the best algorithms.
– Helped deploy ML models using Flask/FastAPI for real-time predictions.

•**Java Development Intern** *May 2024 - July 2024*

AICTE-Next24Tech Online

– Worked with Spring ,JDBC and SQL to build and manage backend systems
– Fixed bugs and improved application performance for better efficiency.
– Collaborated with a team to develop and test new features.

TECHNICAL SKILLS AND INTERESTS

Languages: Java, Python, HTML+CSS,Flask.
Libraries : Numpy,Pandas,Matplotlib,Seaborn.
Web Dev Tools: VScode, Git, GitHub,
Cloud/Databases:MongoDB, Relational Database(mySql),AWS.
Relevent Coursework: Data Structures & Algorithms, Operating Systems, Object Oriented Programming, Database Management System, Software Engineering.
Areas of Interest: Web Design and Development, Cloud Security.
Soft Skills: Problem Solving, Self-learning, Presentation, Adaptability, Communication & Teamwork, Leadership & Initiative.

CERTIFICATES

•**Machine Learning Specialization-**Coursera (By Andrew Ng)

•**Cloud Computing-**NPTEL