Hemanth Kumar Reddy Tiyyagura

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Education

George Mason University   Virginia,United States
Master of Science - Computer Science(ML Concentration); GPA: 3.63/4   January 2022-December 2023*

SASTRA University   Thanjavur,India
Bachelor of Technology - Computer Science; GPA: 3.5/4   July 2016 - July 2020

Skills

- **Technologies:**   Machine Learning, Deep Learning, Open-CV, NLP, Cloud Computing(AWS),Full Stack Development
- **Languages:**   Python, SQL, HTML, CSS, C,Java
- **Frameworks:**   Scikit ,Django, NLTK, Streamlit, TensorFlow, Keras,Pytorch,Flask,Angular
- **Tools:**   Power BI, Tableau, Kubernetes, Docker,Git ,Informatica MySQL ,MS Excel, MS Power Point, MS Word
- **IDE:**   Google Colab, Spyder, Pycharm, JupyterLab
- **Platforms:**   Windows, AWS, Linux
- **Soft Skills:**   Leadership, Event Management, Time Management

Experience

Cognizant Technology Solutions   India
Programmer Analyst (Full-time)   Aug 2020 - Nov 2021

- In my role at CTS, I spearheaded a transformative project that harnessed a suite of AWS services to build a robust and scalable **RESTAPI** for retrieving customers data
- Integrated AWS services including **API Gateway**, **CloudFormation**, **Lambda**, and **RDS** for efficient customer data retrieval,**IAM** for user access control
- Provided dedicated support to R-Studio developers through the **Jira portal**, assisting with troubleshooting and issue resolution.
- Leveraged **SQL** expertise to investigate and diagnose data discrepancies, anomalies, and performance bottlenecks within the **Tableau** data sources.

Projects and Publications

- **EcoClassifier-Flask-based Garbage Classification Web App**: (Flask,Python,CNN,Tableau,Pytorch,HTML)
  - Developed an innovative Flask-based web application that utilizes CNN to classify waste materials into recyclable or organic categories with PyTorch to achieve accurate waste classification(92% accuracy)
  - The user-friendly web interface allows individuals to upload images of waste items and receive instant predictions, promoting sustainable waste management practices and raising awareness about recycling.
  - Integrated Tableau for data visualization, presenting waste management insights and trends.

- **Semi-Supervised GAN for Facial Emotion Recognition**: (CNN,Python,Semi-Supervised GAN,Pytorch)
  - Employed the GAN generator network to create synthetic facial expressions, effectively expanding the dataset and GAN discriminator for binary classification, distinguishing between real and fake images as well as multi class classification
  - I substantially improved the accuracy of facial emotion recognition.Using a traditional CNN on the same 100 images yielded a mere 30% accuracy, while the semi-supervised GAN pushed this accuracy to nearly 63%(CK Dataset)

- **Facial Emotion Recognition using Haar Cascade and CNN** : (Python,CNN,Scikit,Pytorch,Computer Vision)
  - Published a research project in Springer, presenting a comprehensive facial recognition system that integrated Haar Cascade for facial detection, data augmentation to enhance dataset diversity, and CNN for emotion classification.
  - Paper Title:**Recognition of Facial Expression Using Haar Cascade Classifier and Deep Learning**
  - IEEE Publication Link: https://link.springer.com/chapter/10.1007/978-981-16-5529-6_27

- **Full Stack Ecommerce Website**: (Django,MySQL,Bootstrap,HTML,CSS,Python,RestAPI,CRUD)
  - Developed a full-stack ecommerce website using Django framework with Bootstrap for responsive user interfaces featuring user authentication for secure login and registration.
  - Collaborated in implementing CRUD operations, enabling users to effortlessly add items to the cart and manage their selections using POST, GET, and PUT data interactions.

Certifications and Awards

- Actively participated in an NLP-focused hackathon organized by NIT Patna, securing 81st position.
- Certifications from Dockship platform for active participation in data science challenges.DOCKSHIP.
- Participated in the Robotics Conference organized by IEEE held at SASTRA University, Thanjavur,India