Neela Kumar Raju

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PROFESSIONAL SUMMARY

Data Science intern with practical experience developing AI and machine learning models for tasks like face and speech recognition. Strong background in Python programming, data preparation, and deploying models in applied settings. Improved data processes, achieving up to 25% efficiency gains and supported decision-making by analyzing trends and patterns.

SKILLS

Programming
Python (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn)

Deep Learning
Neural Networks (ANN, CNN), Transfer Learning, Basic Computer Vision

Machine Learning
Feature Engineering, Model Training, Hyperparameter Tuning, Regularization, Supervised & Unsupervised Learning

Tools
Power BI, MS Office, Tally ERP, Google Workspace

EDUCATION

Professional Training - Data Science Diploma, *Innomatics Research Labs* 10/2023 – 08/2024 | Hyderabad

Bachelor of Commerce, *Anish College of Commerce* 04/2016 – 06/2019 | Hyderabad

INTERNSHIP EXPERIENCE

Data Science Intern, *Innomatics Research Labs* 09/2024 – 12/2024 | Hyderabad

- Conducted advanced exploratory data analysis and statistical modeling, increasing process efficiency by 25% and uncovering key business insights.
- Developed and deployed machine learning models to forecast KPIs, reducing project turnaround time by 15% and improving predictive accuracy by 12%.
- Automated data preprocessing pipelines in Python, cutting manual data cleaning effort by 30% and standardizing data formats across projects.

PROFESSIONAL EXPERIENCE

HR cum Accountant, *RK Royal Engineers Pvt Ltd.* 09/2021 – 08/2023 | Hyderabad

- Streamlined financial record-keeping using Tally ERP, reducing reconciliation errors by 30% and improving monthly reporting accuracy.
- Managed payroll processing for 50+ employees, ensuring 100% compliance with statutory requirements and on-time salary disbursement.
- Automated the filing of 12+ GST, TDS, and tax returns monthly and quarterly, ensuring 100% compliance and preventing penalties.

PROJECTS

Face Reidentification Using Deep Learning, *Tools: MobileNetV2, VGG16, ResNet50V2, ONNX, Keras*

- Engineered facial recognition models using MobileNetV2, VGG16, and ResNet50V2, processing 32,000+ images across 7 distinct classes.
- Increased model accuracy by 10% through advanced data augmentation techniques, including flipping, grayscale, and blur transformations.
- Split dataset into 80% training, 10% validation, and 10% testing, ensuring balanced evaluation and robust model validation.
- Converted the best-performing model to ONNX format, reducing inference time to 1.73 seconds per 100 images on low-resource hardware.

Speech-to-Speech LLM Bot, *Tools: Whisper, Llama 2, Pyttsx3, Google Colab*

- Developed a speech-to-speech AI agent integrating Whisper for speech-to-text, Llama 2 for language modeling, and Pyttsx3 for text-to-speech synthesis.
- Enabled multi-input support, allowing users to interact via microphone, webcam, and text, increasing system accessibility.
- Achieved sub-3 second response times by optimizing Whisper-Llama integration and minimizing processing latency.
- Delivered a human-like conversational interface, simulating natural speech interaction using state-of-the-art LLM workflows.

Scientific Citation Classifier Using Machine Learning, *Tools: TF-IDF, Logistic Regression, Regex, PDF/XML Parsing, EDA*

- Built a citation classifier for Kaggle's "Make Data Count" competition, categorizing citations as Primary or Secondary with high accuracy.
- Extracted and processed structured and unstructured text from 500+ scientific XML and PDF files using PyMuPDF and pdfplumber, improving preprocessing accuracy by 15%.
- Identified and extracted 5,000+ dataset mentions (DOIs, PDB IDs, GEO Accession IDs) using custom regular expressions, ensuring high recall and precision.
- Generated contextual features using TF-IDF vectorization and fine-tuned Logistic Regression models, increasing validation accuracy by 8%.

CERTIFICATES

Advanced Data Analysis - Innomatics Research Labs | Exploratory Data Analysis - Innomatics Research Labs |
Machine Learning Certification - Innomatics Research labs | Advanced Data Science with Python - NASSCOM

LANGUAGES

English | Hindi | Telugu