Chaya P

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PROFESSIONAL SUMMARY

Bringing over 2+ years of invaluable experience as a Data scientist.

EXPERIENCE – 2 Years

Sravathi Advance Process Technologies Pvt Ltd, (August 2021 – August 2023)- Data Scientist, Bengaluru.

- Design and implementation of a comprehensive **end-to-end data pipeline** for sensitive skin care data within a US-based medical MNC. Successfully managed the extraction and integration of vast patient data from over 50 hospitals, covering diverse skin conditions, facilitating thorough causality analysis.
- Furthermore, prioritizing beyond accuracy, we ensured the implementation of **explainable AI**, utilizing metrics such as precision and recall for **classification tasks** in medical data analysis. This approach guarantees a deeper understanding of model decisions, fostering trust and reliability in our insights.
- Applied advanced statistical techniques, including parametric and non-parametric testing, to identify crucial features from frequency data for precise classification of surgical skin conditions. Ensured the automation of manual processes by collaboratively collecting domain-specific data and analyzing feature dependencies within a multidisciplinary team.
- Developed a **sentiment analysis model** for clients' products, leveraging the DistilBERT model, achieving an impressive **85% accuracy** through meticulous data balancing and the implementation of a binary cross-entropy loss function.
- Additionally, designed and implemented EmoInt, an innovative emotion intensity recognition system, integrating NLP and regression techniques.
- Utilized a dual-model approach, blending traditional **machine learning and DistilBERT**, to predict emotion intensities as continuous variables, enhancing interpretability and capturing nuanced variations in text-based emotions. Moreover, actively contributed to a dynamic team environment, showcasing technical proficiency and collaborative prowess.

Individual project

1. **Object detection using Mobilenet**

- Employed MobileNet, a lightweight CNN architecture, for object detection, achieving approximately 60% accuracy. Despite its lower accuracy compared to larger models, MobileNet's efficiency makes it suitable for resource-constrained environments. Through techniques like data augmentation and transfer learning.
- Fine-tuned the model for the task. While not state-of-the-art, its balance of speed and performance makes it practical for real-time applications. Ongoing efforts focus on further optimization and validation for reliable real-world deployment.

2. **Language Translation from English to Hinglish**

- Developed a language translation system using Hugging Face Transformers. Implemented translation from English to Hinglish using the "findnlp/t5-hinglish-translator" and “SkAndMl/english-to-hinglish” model. Leveraged state-of-the art transformer architecture for accurate and efficient multilingual translations.
- Contributed to a versatile solution capable of handling diverse language pairs and maintaining precision across various linguistic nuances.

3. Dedicated to continuous self-improvement, I have undertaken rigorous self-study in AI and machine learning techniques. My proactive approach includes exploring cutting-edge advancements such as Generative AI, NLP methodologies including LangChain and Retrieval Augmented Generation, as well as Computer Vision techniques and Large Language Models.

4. Driven by a passion for innovation, I actively engage in personal research and study to remain abreast of emerging trends and methodologies in artificial intelligence. This commitment ensures that my skills are consistently updated with the latest advances in the industry, empowering me to contribute effectively to projects and stay at the forefront of technological advancements.

PERSONALITY SKILLS

- Analytical Thinking
- Problem Solving
- Team Player
- Time Management
- Communication & Adaptability
- Emotional Intelligence

TECHNICAL SKILLS

- **Python, SQL** (postgreSQl), ETL, Data model.
- Exploratory Data Analysis, Data preprocessing, Feature Engineering, Data Manipulation, Data Management, Data Visualization.
- **Machine learning Algorithms:** Regression, Classification, predictive Analysis, Decision tree, Bagging and Boosting Techniques, Dimensionality Reduction Techniques, Clustering.
- **Deep learning Algorithms:** FCNN, **CNN**, RNN, LSTM, GRU's, Transformers.
- Large language models (Hands on Bert, t5), OCR, Generative AI, Vector Database, Retrieval Augmented Generation (RAG), Pretrained models, Transfer Learning.
- **Computer vision – Image classification, Image processing, Image segmentation, pretrained models –** (VGG, Inceptiob, ResNet, MobileNet, DenseNet)
- **Frame works:** Pytorch, Tensor flow, LangChain.
- **Tools & Libraraies:** Microsoft Excel, Pandas, Numpy, Matplolib, Seaborn, Scikit-learn, **Opencv**, **Hugging face transformer library**, **pyspark, Fastapi**, sqlalchemy, NLTK, spacy, Power BI, web Scraping (Beautiful Soup), Word Embeddings, Tokenization, Github, visual studio code.

EDUCATION

Masters in Organic chemistry (St. Josephs college of science) (June 2019-July 2021) (CGPA – 8.1), Bengaluru.