Mownetharan A K S

linkedin.com/in/mowne

github.com/mowne67/Portfolio-Mowne

aksmownetharan@gmail.com

+91 9840895746

Bangalore

EDUCATION

Indian Institute of Technology Madras	**Chennai**
B.Tech in Aerospace Engineering	*May 2022*

- Coursework: Data Analytics, Applied Statistics, Probabilistic Systems Analysis & Applied Probability, Linear Algebra, Differential Equations, Complex Variables, Python for Data Science

SKILLS & CERTIFICATIONS

- **Certifications**: Deep Learning with Tensorflow, Machine Learning, Computer Vision, Generative AI essentials
- **Skills**: Python, EDA, Modelling, NLP, SQL querying, Cloudera CDSW, Pipelines, Vision, RAG & fine-tuning LLMs
- *Libraries: Pandas, Scikit-Learn, Tensorflow, Numpy, ScraPy, PyTorch, Streamlit, Flask, OpenCV, PySpark*
- *Gen AI packages: LangChain, FAISS, Gemini, OpenAI*

PROFESSIONAL EXPERIENCE

IQVIA	**Bangalore**
Analyst (Advanced Analytics)	*(July 2022 - *)*

- Implemented Advanced NLP techniques to perform Theme Generation, Sentiment Analysis, text-based Clustering and classification by utilizing Generative AI, Vector Embeddings & Semantic Search to provide actionable insights from large-scale survey feedback data
- Conducted Robustness Testing on Price Elasticity CI/CD pipelines in Cloudera CDSW along with comparative inflation analysis to evaluate pricing strategies on pharmaceuticals, ensuring strategic pricing decisions were data-driven.
- Developed an AI-ML based Survey Automation tool that utilizes parameter-tuned Boosting ML algorithms which results in a reduction in time taken to reach out and complete the surveys by 8%
- Enhanced various projects such as Market Segmentation, Persona Enrichment to improve target identification & market strategies with modelling and extrapolation techniques

The Prints Company	**Remote**
Machine Learning Engineer Intern	*(Feb 2022 - Mar 2022)*

- Deployed Generative Adversarial Network StyleGAN2 with PyTorch to generate designs similar to training data.
- Developed 5 new web-crawling spiders with ScraPy to scrape high quality design images from popular stock image sites.
- Handled data resizing & cleaned junk from 10,000+ scraped raw training images with VGG-16 clustering model.

PROJECTS

LLM Applications (*March 2024*)

- Developed a generative movie script authoring tool using fine-tuned LLMs (Gemini) for plot exploration and script generation based on user input variables.
- Developed a RAG-based LLM application that performs Topic Modelling & Querying capabilities using LLAMA3 which makes use of Similarity Search with FAISS Index.
- Explored You-Only-Look-Once (YOLO) models to perform Object detection and tracking of CCTV data to generate customer & behavior insights and Generate reports using various LLMs.

Transfer Learning for Natural Language Processing

- Implemented various pre-trained NLP text embedding models NNLM, USE, GNews Swivel from Tensorflow Hub.
- Performed transfer learning to fine-tune models of various dimensions on Quora Insincere Questions Dataset.
- Visualized performance metrics with TensorBoard for fine-tuned and high dimensioned version of all models.

Term Deposit Marketing Classification

- Classified Term Deposit subscription with data from 40000+ calls made by a Portuguese banking institution.
- Trained and Tested Random Forest Classifier, Logistic Regression, Support Vector Machine & KNN models.
- Generated Synthetic samples from minority class to diagnose Class Imbalance with SMOTE method.

COVID-19 Data Exploration & Analysis

- Explored COVID19 dataset, published by John Hopkins University along with World Happiness Report dataset.
- Visualized two datasets, revealing a surprising relationship between maximum infection rates and happiness factors

LEADERSHIP EXPERIENCE

Saarang (Cultural fest of IIT Madras)	**Chennai**
Publicity Coordinator *Mar 2018- Mar 2019*	

- Spearheaded a team of 50 ambassadors across various colleges to publicize Saarang 2019 in Tamil Nadu.
- Amplified the outreach with a 28% increase in footfall in Saarang from 70,000 in 2018 to 90,000 in 2019.