Arvind Chary Padala

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Summary

Data Scientist and Software Engineer with 2+ years of experience creating AI-driven solutions and automation frameworks. Expertise in generative AI, big data technologies, and machine learning using TensorFlow, PyTorch, and PySpark. Developed scalable systems for predictive analytics, NLP, and data visualization, driving operational efficiency and actionable insights. Specializes in applying advanced data science techniques to solve real-world challenges.

Education

Rutgers The State University   *Aug 2023 – May 2025*
MS in Statistics-Data Science

- **Coursework:** Data Mining, Natural Language Processing, Advanced Data Management, Data Wrangling, Regression and Time series, Statistical Learning (Deep Learning, Statistical Models and Computing

Skills

Programming and Database: Python, R, SQL, HTML, CSS, JavaScript, MongoDB, ScyllaDB, MySQL

Framework and Analytics: NumPy, Pandas, TensorFlow, Keras, PyTorch, Seaborn, PowerBI, Tableau, PySpark, Hadoop

Generative AI: LLMs, OpenAI, Streamlit, Hugging Face

Core Expertise: NLP, Neural Networks, Machine Learning, Statistcs, Data Science

Professional Experience

Software Engineer   *India, HYD*
INFOSYS LTD   *Aug 2021 – July 2023*

- Automated Selenium and Robot Framework-based quality assurance, boosting AI pipeline reliability by 30%.
- Led development of a resilient Database Query System and optimized SQL and Oracle datasets, enhancing performance and resolving critical issues.
- Designed Power BI dashboards to analyze telecom data trends, enabling business teams to make data-driven decisions and improve operational efficiency.

Research Projects

Transformer-Based Personalized Movie Recommendation System   *github link* ↗

- Engineered a DistilBERT and Sentence-BERT recommendation system, achieving 61% accuracy and outperforming baseline models.
- Fine-tuned DistilBERT for multi-label classification, improving F1 score by 2.8x through class balancing and hyperparameter tuning.
- Developed a scalable semantic matching pipeline with Sentence-BERT embeddings and FAISS indexing, achieving a top-3 retrieval precision rate that exceeded baseline TF-IDF methods.

Human Activity Recognition Using Machine Learning and   *github link* ↗
Data Analytics

- Developed a Human Activity Recognition System using smartphone sensor data and machine learning, achieving high classification accuracy.
- Implemented Convolutional Neural (CNNs) and Recurrent Neural Networks (RNNs) with Long Short-Term Memory (LSTM) units to process raw sensor data, boosting activity recognition accuracy significantly.

Covid-19 Face Mask Detection Using CNN and Computer Vision *github link* ↗

- Devised a CNN-based COVID-19 Face Mask Detection System with superior real-time accuracy for images and videos.
- Optimized model performance through data augmentation and predictive analysis, enabling detection speeds exceeding 30 frames per second for public safety applications.

FIFA 2024 Player Value Prediction *github link* ↗

- Developed machine learning models for player value prediction using FIFA 24 data, leveraging advanced regression techniques like Random Forest and XGBoost, achieving an RMSE of 1.52 and R^2 of 0.87.
- Conducted comprehensive analysis using feature selection, hypothesis testing, and PCA to address multicollinearity, enhancing model interpretability and predictive accuracy.

Hybrid Trading Strategy Innovator *github link* ↗

- Designed a hybrid trading strategy combining LSTM-based predictions with technical indicators (SMA, RSI, ATR), achieving portfolio returns of nearly 2x (BTC: 196.82%) and 1.6x (COCOA: 163.88%) compared to traditional strategies.
- Integrated dynamic volatility thresholds and predictive models to reduce false signals in volatile markets, increasing Sharpe ratios (2.59 for BTC, 2.16 for COCOA) and enhancing risk-adjusted performance.

Achievements and Extras

- **Content Creator:**
  Publishes blogs on AI, machine learning, and data science at www.arvindchary.io ↗, fostering knowledge exchange and community engagement.

- **Paper Presentation:**
  Presented Human Activity Recognition research at ICICCI-21 (April 2023).

- **Rookie of the Quarter 2022,** INFOSYS LTD

- **INSTA RISE Award 2022 - Client Appreciation,** INFOSYS LTD