ARUDHRA NARASIMHAN VENKATACHALAM
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PROFESSIONAL SUMMARY

An aspiring data scientist with expertise in predictive analytics and quality assurance automation, delivering operational efficiencies and business insights through machine learning models and automation tools. Skilled at leveraging Generative AI, fuzzy logic, and automation techniques to streamline processes and enhance business outcomes. As a data scientist, I aim to harness analytical frameworks and machine learning to unlock actionable insights and foster transformative business solutions.

WORK EXPERIENCE

Shamal Holding - Internship **Dubai, United Arab Emirates**
Data Science Intern Jun 2024 - Aug 2024

- Improved chatbot performance by 10% by analysing denormalized chat logs using Generative AI, driving better user insights and system interactions..
- Implemented fuzzy logic to identify and unify similar customer records, enhancing database integrity and enabling consistent customer tracking across businesses.
- Got engaged in predictive modelling for Dubai Real Estate time series data, applying advanced statistical techniques to forecast market trends and inform strategic decisions.

Tekion India Pvt Ltd **Chennai, India**
Automation QA Engineer - I Nov 2021 - Sep 2023

- Spearheaded automation initiatives, saving over 20% of manual testing time by automating regression test cases using Selenium, significantly improving testing efficiency.
- Utilised Python (Pandas, Numpy) for data validation, improving report validation efficiency by 50%.
- Led IoT-based Quality Assurance initiatives for a Vehicle Tracking System, reducing critical post-production issues by 45% through comprehensive test automation and monitoring solutions.
- Conducted functional testing and created test cases for an in-house CRM and Product Master .
- Drafted quality test cases for in-house eCommerce app ‘Tekion Store’ reducing post production issues by 70% and facilitating a smooth launch.

National University of Singapore - Internship **Singapore**
Data Analytics using Deep Learning Dec 2019 - Jan 2020

- Developed a CNN model for diabetic retinopathy prediction, achieving 82% training accuracy and 81% testing accuracy.
- Created a web interface for model interaction, enhancing user accessibility and model deployment.
- Engaged in end-to-end ML pipeline processes, from data preprocessing to model deployment.

EDUCATION

University Of Birmingham (Sep 2023 - Oct 2024) **Dubai, United Arab Emirates**
Master Of Science , Data Science Degree Classification: Distinction

- Chancellor’s Academic Scholarship Recipient

SASTRA Deemed University (Jul 2017 - Jul 2021) **Thanjavur, India**
B-Tech Computer Science and Engineering Cumulative GPA : 8.04/10

PROJECTS

- **Real Estate Predictive Analytics:** Developed and implemented ARIMAX models for predictive analytics on Dubai real estate, gathering data from REIDIN dashboard, World Bank Records, Dubai Statistics and Dubai Pulse, targeting various community categories, and achieved a Mean Absolute Percentage Error (MAPE) of 2-3%.
- **Speech Impediment detection using fine-tuned lightweight LLM and traditional ML classifiers :** Developed a multi-modal approach for speech disorder classification by integrating audio features and ASR transcriptions using LoRA fine-tuned DistilBERT and various ML classifiers, significantly improving classification accuracy on limited datasets.
- **Flower Prediction using Transfer Learning :** Created a web based flower prediction app during my postgraduate university hackathon. Implemented transfer learning approach and used the “EfficientNet” model for making predictions. The model achieved training accuracy of 96% and validation accuracy of 94%.
- **Predictive Modelling in Professional Basketball :** Conducted a comprehensive analysis using XGBoost, Random Forest, SVR, and Linear Regression to predict player minutes based on turnovers ,personal fouls, player positions and other performance metrics. Conducted EDA and hypothesis testing (ANOVA-Test) and concluded with all selected models performing equally well.

CERTIFICATES

1) Machine Learning by Andrew Ng - Coursera
2) Practical Data Science on the AWS Cloud Specialization - Coursera
3) Google Data Analytics Professional Certificate - Coursera
4) Generative AI with Large Language Models - Coursera

SKILLS

- **Programming Languages ,Tools & Techniques :** Java, Python, Selenium, MySQL, AWS Sagemaker, Power BI, Matplolib, Scitkit-Learn, Neural Networks, Transfer learning, Tensorflow, Pytorch, Langchain, Time Series analysis, Predictive analytics, ML algorithms, Numpy, Pandas, Streamlit, Gradio, Seaborn, Hypothesis Testing, Statistical Analysis.
- **Soft Skills** : Communication, Team Building, Negotiation, Iterative Development, Leadership.