ARUDHRA NARASIMHAN VENKATACHALAM
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PROFESSIONAL SUMMARY

Data Scientist with a consulting mindset, leveraging machine learning and advanced analytics to drive strategic decision-making and solve complex business problems. Expertise in predictive modeling, generative AI, and automation with a proven ability to deliver measurable business outcomes. Adept at collaborating with cross-functional teams, translating data insights into impactful strategies, and leading initiatives to enhance operational efficiencies.

WORK EXPERIENCE

Shamal Holding - Internship   **Dubai, United Arab Emirates**
Data Science Intern   Jun 2024 - Aug 2024
- **Optimized decision-making** by developing ARIMAX models for Dubai Real Estate, achieving a 2-3% MAPE in market trend forecasting, empowering executives with actionable insights.
- Enhanced user experience by improving chatbot performance by 10% through generative AI-driven analysis of user interaction logs.
- Standardized customer tracking across business units by implementing fuzzy logic for record unification, ensuring consistent database integrity leading to enhanced customer data management.

Tekion India Pvt Ltd   **Chennai, India**
Automation QA Engineer - I   Nov 2021 - Sep 2023
- Streamlined data validation workflows with Python, increasing efficiency by 50% and ensuring high-quality analytics deliverables.
- Reduced critical production issues by 45% through IoT-based quality assurance initiatives for vehicle tracking systems.
- Automated over 100 test cases using Selenium, decreasing manual testing efforts by 20% and expediting deployment timelines.
- 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
- Predicted diabetic retinopathy using CNN, achieving 81% testing accuracy, enabling early detection in healthcare.
- Deployed an interactive web interface, improving accessibility for medical practitioners.

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% informing high-stakes investment decisions.
- **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 thus contributing towards AI-driven healthcare solutions.
- **Customer Retention with Generative AI:** Analyzed customer interaction data to enhance chatbot responses by 10%, improving user satisfaction and retention for Shamal Holding.
- **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 thus driving data backed coaching decisions.
- **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 93% and validation accuracy of 89%.

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, A/B Testing, Statistical Analysis, Agile methods.
- **Soft Skills** : Communication, Team Building, Negotiation, Iterative Development, Leadership, Data Driven decision making.