YOGESH THANGAMUTHU

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Data Analyst and AI enthusiast with deep expertise in computer vision and machine learning, focused on optimising business workflows through advanced technologies. My specialty lies in developing tailored, dataset-specific models to tackle complex challenges in dynamic environments. Driven by a passion for innovation, Delivered two end-to-end computer vision applications, showcasing advanced development skills. Eager to contribute my analytical skills and strategic insights, I am dedicated to advancing organisational objectives and Eager to learn new technologies.

EDUCATION

Aston University, MSc – Data analytics (Distinction), Birmingham, UK   **Jan' 22 – Apr' 23**
Research Paper - **Comprehensive Study of Price Trends for Commercial Daily Needs and Future Predictions**

Anna University, BE – Computer Science Engineering (First class), Chennai, India   **Aug' 17 – Jul' 21**
Research Paper - **Image Processing in Skin Disease Diagnosis (ML Based)**

KEY SKILLS

- **AWS Services** – Amazon ec2, RDS, Lambda, Api gateway,S3.
- **Skills** – Custom data Modelling, Data labelling, Dyanamic dataflow application.
- **Programming Languages & Libraries** - Python, , MySQL, Opencv, Pyqt, Flask, Nginx-config.
- **Data Integration Tools** - Power BI, GitHub, GitLab, Tableau.
- **Tools and Methodologies** – Docker, Kafka, Nginx, Yolo ,Neural Networks, Infrastructure Networking.

WORK EXPERIENCE

Data Analyst– ND Spectra, Bicester, United Kingdom   **Nov' 23 - Present**
Build, design, development, migration, and maintenance machine learning based application.

- **Bird Detection Project**: Developed and delivered an end-to-end bird analytics application for Indian airports, utilizing image classification, object detection, and PyQt5 for user interface development.
- **Parking Management System**: Created a comprehensive Windows application for real-time car parking management, covering data augmentation, server maintenance, and video analytics integration.
- **Real-Time Video Analytics**: Built and deployed real-time video analytics applications using PyQt5, enhancing operational efficiency through automated object detection and tracking in live video streams.
- **Web Server Management**: Managed and optimized session handling with Nginx and FlaskApp integration, ensuring seamless real-time analytics and reliable web server performance.
- **Database Broadcasting**: Implemented Kafka and MySQL for broadcasting real-time analytics, managing data polling, and ensuring effective data leak prevention for high-traffic environments.
- **Compute Vision Expertise**: Developed and optimized real-time multiple video streaming solutions with object detection and OCR models, delivering high accuracy under varied lighting and angles.
- **Machine Learning Workflow**: Led end-to-end ML processes, from data collection and annotation to model training and validation, achieving high model accuracy in challenging image conditions.
- **Neural Network Development**: Built robust neural networks, focusing on low-light image accuracy and multi-angle robustness, ensuring reliable model performance across diverse operational scenarios.

Data Analyst Internship – ND spectra, Bicester, United Kingdom.   **Apr' 23 - oct' 23**
Analyses, review, quality, and performance enhancement thought Technical support.

- **Data Collection and Manipulation**: Skilled in gathering and refining complex datasets, preparing them for insightful analysis and dashboard visualization.
- **Dashboard Development**: Developed interactive, user-friendly dashboards that provide real-time insights, enhancing decision-making processes for various business operations.
- **Server and Database Management**: Maintained server operations and database integrity, ensuring efficient data storage, retrieval, and optimal system performance..
- **Data Annotation and Large Dataset Handling**: Expertly annotated large datasets and managed extensive data pools for advanced machine learning model training.
- **Machine Learning Model Validation**: Performed critical validation of machine learning models, identifying and rectifying defects to enhance model accuracy and reliability.

BUSINESS DEVELOPMENT ACTIVITIES

- **Team player,** Jan' 21 – Contributed to data analysis and reporting, highlighting key findings and recommendations to support the NGO's efforts in addressing community needs effectively.

- **Talent Development Club, Jan' 23** - Conducted technical training and workshop simulator sessions on Machine learning based Computer vision in Aston university in representing ND Spectra.