Manova L M

AI Engineer and Researcher

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PROFILE

- Expertise in deep learning, computer vision, and large language models (LLMs), with hands-on experience in building and deploying AI-driven solutions.
- Proficient in managing customer requirements and delivering tailored AI solutions while fostering effective collaboration across diverse teams.
- Passionate about adopting cutting-edge technologies to drive innovation and create scalable, real-world applications.

SKILLS

Artificial Intelligence
- Deep Learning
- Computer vision
- Machine Learning

MultiModal
- Large Language model
- Vision based model
- Generative AI

Framework
- PyTorch
- TensorFlow
- Keras.

Soft Skills
- Customer handling
- Cross-Functional Collaboration

WORK EXPERIENCE

Ai Engineer 07/2024 – present | New Taipei, Taiwan
IEI Integration Corp
Digital Fence for New AI Feature Implementation on Embedded Systems

- Implementing Vision-Language Models (VLM) and NLVR models into the latest object detection system for enhanced visual and textual data processing.
- Enabling detailed vision descriptions and ongoing system monitoring based on user inputs.

AI Engineer 06/2023 – 05/2024 | Douliu, Taiwan
Intelligent Recognition Industry Service Centre
iTrash Recycling Detection

- Innovated a state-of-the-art deep learning solution for recycling machines, leveraging computer vision to boost detection accuracy by 50%, significantly enhancing operational efficiency and reducing sorting errors by 30%

Vertical-Line Mura Defect Detection using VLM-YOLOGA for TFT-LCDs
- Addressed challenges in detecting minor defects in TFT-LCD screens, particularly LV1 abnormalities, using AI techniques.
- Implemented an innovative new deep learning algorithm based on YOLOv8 to swiftly and accurately identify V-line mura defects in LCD images.

Defect detection technology of generation and incremental learning - grinding wheel defect detection
- Developed a unique deep learning technology utilizing ellipse fitting to capture the contour of grinding wheels and detect shape defects such as deformation, poor appearance, missing corners, and cracks.
- Awarded the prize in the 2023 AI+ Rising Talent Selection for this innovative work.

Research Fellow 07/2017 – 02/2021 | Chennai, India
Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science and Technology
- Appointed as the team lead for a government-funded project by Chennai, NIDHI PRAYAS, Department of Science and Technology (DST), Government of India.
- Integrated OpenCV-based onboard object detection system to enhance UAV capabilities and collaborated with multidisciplinary teams to ensure project success and compliance with timelines.

EDUCATION

M.Sc Aeronautical and Electronic Engineering(specialist in AI) 04/2021 – 01/2023 | Taiwan
National Formosa University
Thesis: Multi-Spectral Image-Based Air Quality Prediction using the Ensemble Learning Method
- Developed a deep learning multimodal approach for environmental prediction, significantly reducing the need for monitoring stations in real-world applications.
- Awarded the overall prize in the 5G AI Competition and authored multiple publications.

PROJECTS

Autonomous based steering angle prediction in the simulation environment 02/2022 – 05/2022
- Researched autonomous steering angle prediction using deep learning and reinforcement learning in simulation environments.

- Developed models to navigate simulation environments with other vehicles, traffic lights, and speed limits, focusing on improving autonomous vehicle navigation.

CERTIFICATES

- Python
- Data visualization with Tableau
- Deep learning course: Deep dive into deep learning
- LLM Engineering: Master AI, Large Language Models & Agents
- Data science course- mastering the fundamentals

PUBLICATIONS

Vertical-Line Mura Defect Detection for TFT-LCDs 25/10/2024
IEEE ACCESS

Ensemble Learning-based Air Quality Prediction for Drones 01/07/2023
Proceedings of the 7th Annual Conference on Engineering and Information Technology (ACEAIT), Japan

Design of uncrewed amphibious aerial vehicle for in-situ water quality assessment 12/2022
International Conference on Integrated Water Resources Management: Prospects and Challenges (ICIWRM 2022)

Multi-Spectral Image-Based Air Quality Prediction using the Ensemble Learning Method 18/08/2022
CVGIP 2022: The 35th IPPR Conference on Computer Vision, Graphics, and Image Processing

Development of 3D Printed Floating Quadrotor for Collection of Algae in Remote Water Bodies 09/2019
Computers and Electronics in Agriculture, Elsevier

Enhancing Air Quality Prediction with Ensemble Learning Using Aerial Multi-spectral Camera
IEEE Internet of Things Journal, under review