Magesh Sundaravel

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Education

University of Pavia **2020 – 2024**
Master of Science in Industrial Automation Engineering *Pavia, Italy*

St.Peter's College of Engineering & Technology **2015 – 2019**
Bachelor of Engineering in Mechancial Engineering *Chennai, India*

Certifications

- Machine Learning Specialization - coursera
- Generative AI with Langchain and HuggingFace - udemy
- Mathematics for Data Science - udemy
- OpenCV Bootcamp - OpenCV.org

Experience

Lookalike **May 2025 - Present**
AI Engineer *Pavia, Italy*

- Developed a voice-to-image search application using ElevenLabs API for speech-to-text transcription, Vertex AI for multimodal embeddings, and cosine similarity for retrieval, achieving a 15% improvement in accuracy.
- Built ETL pipelines using GitHub Actions to automate daily updates for 30,000 Amazon and 800,000 eBay products, ensuring reliable data synchronization
- Engineered a WhatsApp Business API integration for our company's AI-powered e-commerce platform, enabling seamless database-driven product retrieval through intelligent chatbot interactions.
- This solution facilitated over 10,000 monthly AI-driven customer conversations, driving a 20% increase in user engagement.

TI Metal Forming **May 2019 - Aug 2020**
Graduate Engineer Trainee *Chennai, India*

- Implemented a data-driven inventory management system within ERP, reducing inventory holding time by 25% and increasing stock turnover by 40%.
- Developed models to optimize item allocation, improving delivery efficiency by 30% and reducing order errors by 20%.
- Collaborated with cross-functional teams to integrate data systems.

Projects

Anomaly Detection in Time Series Data | *Machine Learning, Python, Statistical Methods* **Mar 2024**

- Built an anomaly detection system for time series data, increasing detection accuracy by 30% through statistical methods (Standard Deviation, IQR) and machine learning.
- Enhanced model performance by generating synthetic anomalies, expanding the training dataset by 50% and improving rare anomaly detection by 40%.
- Applied supervised learning algorithms (SVM, Random Forest), achieving an F1-Score of 0.85 and an AUC of 0.90.

Technical Skills

Programming Languages: Python, JavaScript, C++
Cloud Platforms: AWS, Azure, GCP
Frameworks: Pytorch, Langchain, scikit-learn, OpenCV, FastAPI
Data Engineering: SQL, ETL, GitHub Actions
DevOps: Docker, Kubernetes, CI/CD, Terraform

Competitions

IEEExtreme 18.0 **Oct 2024**
Global Coding Competition

- Secured 2500th rank out of 80,000 teams in IEEExtreme 18.0.
- Solved complex coding challenges efficiently.