

SARA CAVALLINI

DATA SCIENTIST | AI ENGINEER | COMPUTER VISION SPECIALIST | PROJECT MANAGER | LINUX EMBEDDED SW ENG.

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Location: Gold Coast, QLD | Available Australia-wide

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PROFESSIONAL SUMMARY

AI Engineer and Data Scientist with expertise in end-to-end Computer Vision, Deep Learning, and Embedded Linux systems. Proven track record in developing production-ready AI solutions including object detection, anomaly detection, facial recognition, and real-time video analysis using state-of-the-art architectures (YOLO, ResNet, GANs, CLIP). Skilled in managing technical teams and delivering scalable AI/ML pipelines for industrial automation and intelligent systems. Strong foundation in C/C++ development, Yocto Project BSP customization, and system integration. Bachelor's degree in Computer Engineering with hands-on experience in PyTorch, TensorFlow, OpenCV, and NLP technologies. Seeking challenging opportunities in Australia's AI, Data Science, or Software Engineering sectors.

LICENSES & CERTIFICATIONS

Full Driver's License (Class C)

Italian License with NAATI translation

RSA & RSG QLD

Responsible Service of Alcohol & Gambling Licenses

TECHNICAL SKILLS & COMPETENCIES

AI & Machine Learning

- Deep Learning (CNN, RNN, LSTM)
- Computer Vision (YOLO, ResNet, RCNN)
- Object Detection & Classification
- Anomaly Detection
- GANs & CLIP models
- Transfer Learning
- Model Optimization & Deployment
- Time Series Forecasting

Computer Vision

- Real-time Video Analysis
- Facial & Emotion Recognition
- OCR & Data Extraction
- Image Processing & Segmentation
- MediaPipe, FaceTec, LibreFace
- Keras-OCR, DocTR, Donut

Programming & Frameworks

- Python (Advanced)
- C/C++ (Embedded & User-space)
- PyTorch, TensorFlow/Keras
- OpenCV
- Pandas, NumPy, Scikit-learn
- Bash & Shell Scripting
- Git Version Control

NLP & Data Processing

- Text Classification
- Semantic Search
- spaCy, S-BERT
- LLM Integration (Ollama)
- Document Intelligence
- ARIMA, XGBoost, Prophet

Embedded Systems & Linux

- Yocto Project BSP Customization
- Linux Embedded Integration
- Systemd Services
- Auditd Security Auditing
- Hardware Integration
- System Optimization

Professional Skills

- Project Management
- Team Leadership
- Technical Documentation
- Agile Methodologies
- Client Communication
- Problem-solving
- Requirements Analysis

PROFESSIONAL EXPERIENCE

AI Project Manager (Computer Vision) - KOAN - Bergamo, Italy

Dec 2025 - Present

- Led technical teams in defining tasks, priorities, and project timelines for AI and Computer Vision initiatives.
- Managed end-to-end AI projects from requirements gathering through production deployment.
- Developed and validated solutions for anomaly detection, object classification, and real-time video analysis.
- Provided technical leadership on computer vision model selection, neural network architectures, and ML pipelines.
- Ensured alignment between business objectives, development activities, and delivery milestones.
- Worked hands-on with neural networks, machine learning, image processing, and computer vision technologies.

Computer Vision Object Detection & Tracking Project Management AgriTech Project Pattern Recognition Deep Learning RAG LangChain

Data Scientist / AI Engineer - Alknow srl - Bergamo, Italy

Jan 2025 - Dec 2025

- Developed Computer Vision solutions: object detection, classification, and anomaly detection using YOLO, ResNet, RCNN, CLIP, DINO, and GANs.
- Implemented real-time facial and emotion recognition systems using MediaPipe, FaceTec, and LibreFace.
- Created time series forecasting models using ARIMA, LSTM, XGBoost, and Prophet for predictive analytics.
- Built NLP pipelines for text classification and semantic search using spaCy, S-BERT, and Ollama.
- Automated OCR and data extraction processes with Keras-OCR, DocTR, Donut, and OpenCV.
- Delivered production-ready AI solutions optimized for industrial automation and visual inspection systems.

PyTorch TensorFlow OpenCV YOLO GANs NLP OCR

Junior Embedded Linux Engineer - KOAN - Bergamo, Italy

Feb 2024 - Feb 2025

- Customized Linux BSP using Yocto Project to meet specific hardware and client requirements.
- Developed user-space applications in C/C++ for embedded systems and specialized hardware.
- Created and integrated systemd services for system automation and process management.
- Implemented security auditing solutions using Auditd for embedded Linux environments.
- Performed system integration, debugging, and optimization for resource-constrained devices.
- Developed shell scripts for automation and system configuration tasks.

Yocto C/C++ Linux Systemd Bash

Event Organization Manager - Student Council, University of Bergamo - Italy

2023 - 2025

- Coordinated cross-functional teams to plan and deliver cultural, social, and academic events.
- Managed event logistics, including venue setup, resource allocation, and promotional activities.
- Demonstrated strong leadership, project management, and stakeholder collaboration with external organizations and university departments.

ADDITIONAL EXPERIENCE

Store Manager & Senior Barista - [Reef Cafè - Bergamo, Italy](#)

Mar 2025 - Mar 2026

- Managed daily operations, staff scheduling, and team coordination in fast-paced café environment.
- Developed strong leadership, multitasking, and customer service skills while handling POS systems and financial operations.

Barista, Cook and Bar Staff - [Bar Fede - Rimini, Italy](#)

Jun 2023 - Sep 2023

- Delivered high-volume customer service in seasonal beach bar, demonstrating adaptability and efficiency.
- Managed cash handling, orders, and kitchen operations while maintaining quality standards under pressure.

EDUCATION

Bachelor's Degree in Computer Engineering

2019 - 2023

[University of Bergamo, Italy](#)

Specialized coursework in Machine Learning, Computer Vision, Embedded Systems, Software Engineering, and Data Structures & Algorithms.

LANGUAGES

Italian: Native

English: Fluent

Spanish: Intermediate

INTERESTS & ACTIVITIES

- Competitive Athlete:** Archery competitor since 2014, demonstrating discipline, focus, and goal-oriented mindset.
- Education:** Private tutoring in mathematics and computer science subjects, helping students develop technical skills.
- Community Engagement:** Healthcare volunteering and outdoor sports activities, fostering teamwork and social responsibility.
- Creative Pursuits:** Professional-level pastry creation and culinary arts, showcasing attention to detail and creativity.

Australian work visa eligible | Available for immediate start | References available upon request