

ALESSANDRO CESA

Machine Learning Engineer



WORK EXPERIENCE

Machine Learning Engineer

Circle Group

📅 January 2025 – Present

📍 Trieste, Italy

- Developed Machine Learning models for forecasting flows and arrival times in port and rail terminals, improving prediction accuracy and enabling data-driven logistics planning
- Designed and implemented simulation models for three Italian ports
- Analyzed logistics and terminal processes to identify optimization opportunities
- Assessed and integrated multiple heterogeneous data sources

Software Developer

AI Fabric (External collaboration)

📅 July 2025

📍 Trieste, Italy

- Developed an AI-powered chatbot for a news platform, implementing a two-step “flash-reply + batch” architecture to provide instant feedback and a detailed response from an internal database.

AI & Optimization Intern

Circle Group

📅 October 2024 – December 2024

📍 Genoa, Italy

- Contributed to the development of Machine Learning models for forecasting port and rail flows
- Researched and evaluated advanced Machine Learning techniques for logistics applications

Research and Development Intern

Esteco

📅 March 2024 – May 2024

📍 Trieste, Italy

- Developed Deep Learning models to forecast business process outcomes
- Built simulation tools to generate synthetic business processes datasets, expanding training data for Deep Learning models

EDUCATION

Master's Degree in Data Science and Scientific Computing

University of Trieste

📅 October 2022 – October 2024

📍 Trieste, Italy

- Thesis: Reinforcement Learning on Robotic Arms with Signal Temporal Logic rewards. *Grade: 110/110*
- Focus areas: Machine Learning, Deep Learning, Reinforcement Learning, Generative AI, LLMs, Computer Vision, High Performance Computing.

Bachelor's Degree in Mathematics

University of Trieste

📅 October 2018 – January 2022

📍 Trieste, Italy

- Thesis: Non-linear oscillations in mathematical models of suspension bridges. *Grade: 104/110*
- Focus areas: Pure Mathematics, Applied Mathematics (Physics, Finance, Insurance), Computer Science.

CONTACTS

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in Alessandro Cesa

🔗 AlessandroCesaTs

SKILLS

- Programming Languages: Python, C, C++, Java, SQL
- ML & Data Libraries: PyTorch, Scikit-learn, Numpy, Pandas, LangChain
- Version control: Git, GitHub, GitLab
- DevOps & Tools: Docker, Git, GitHub, GitLab, CircleCI, AWS, SLURM, Bash, n8n

PROFESSIONAL COURSES

Building RAG Agents with LLMs

NVIDIA

- LLM pipelines using LangChain, Gradio, LangServe and Pydantic
- Dialog states and integrating knowledge extraction
- Embeddings and vector stores for document retrieval

Deployment of Machine Learning models

Train in Data

- Clean production code, unit testing, CI/CD
- Containerization and REST API
- Deployment on AWS

LANGUAGES

- Italian — Native
- English — Advanced
- Spanish — Basic