

ALESSANDRO CESA

Machine Learning Engineer



WORK EXPERIENCE

Machine Learning Engineer

Circle Group

📅 January 2025 – Present 📍 Trieste, Italy

- Development of machine learning models for forecasting port and rail terminal flows
- Development of port simulation models
- Analysis of port and terminal processes
- Assessment of available data sources and data acquisition methods

Ai & Optimization Intern

Circle Group

📅 October 2024 – December 2024 📍 Genoa, Italy

- Support in the development of port and rail flow forecasting models
- Research on machine learning techniques for logistics applications

Research and Development Intern

Esteco

📅 March 2024 – May 2024 📍 Trieste, Italy

- Development of deep learning models for forecasting business processes
- Development of simulation tools to generate synthetic business processes datasets

EDUCATION

Masters' 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

Main Subjects:

- Machine Learning, Deep Learning, Reinforcement Learning
- Generative AI, Large Language Models, Computer Vision
- Computer Programming and Software Development Methods
- High Performance Computing

Bachelors' 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

Main subjects:

- Pure Mathematics
- Mathematics applied to physics, finance and insurance
- Computer Science

CONTACTS

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🐙 github.com/AlessandroCesaTs

SKILLS

- Programming Languages: Python, C, C++, Java, SQL
- Machine Learning libraries: PyTorch, Scikit-learn
- Version control: Git, GitHub, GitLab
- DevOps & Tools: Docker, CircleCI (CI/CD), SLURM (HPC Scheduling)

PROFESSIONAL COURSES

Building RAG Agents with LLMs

NVIDIA

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

Deployment of Machine Learning models

Train in Data

- Clean production code for machine learning
- Unit testing, CI/CD
- Containerization
- REST API
- Deployment on AWS

LANGUAGES

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