# Federico Gerardi

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# Education \_\_\_

### University of Oslo, Erasmus+ Exchange

Aug 2025 - Dec 2025

• Coursework: Advanced Deep Learning for Image Analysis, Fog and Cloud Computing, Models of Concurrency

Sapienza University of Rome, M.Sc. in Computer Science

Sept 2024 - Present

- Average: 27.8 / 30
- Coursework: Data Science, Artificial Intelligence, Computer Systems

## Sapienza University of Rome, B.Sc. in Computer Engineering

Sept 2021 - Oct 2024

- Thesis: C Custom Wireless Joystick Development with Arduino and Linux Integration
- Coursework: Mathematics, Computer Science, Physics, Automation

# Experience \_\_\_\_\_

#### LeadTheFuture, Mentee

Remote, Italy

• Selected among top Italian STEM students (<20% acceptance) for mentorship by professionals from Silicon Valley and CERN.

Oct 2025 - Present

Microsoft & FabLab, Computer Vision Engineer (Project Internship)

Rome, Italy

• Implemented computer vision algorithms for **object detection and recognition** in robotic navigation

Mar 2025 – May 2025

DigiLab Sapienza, Research Assistant

Rome, Italy

• Conducted research in **AI, NLP, and Computer Vision** applied to Cultural Heritage

Dec 2024 - Present

## Publications \_\_\_\_\_

# Language Modeling for Epigraphs: a BERT model for EDR's Latin Epigraphs text completion

Sep 2025

Olmo Ceriotti, Federico Gerardi, Saverio Giulio Malatesta, Silvia Orlandi @ IEEE CyberHumanities 2025 - In Press

# Research Projects \_\_\_\_\_

# **Graph Attention Networks for Interpretable Expected Goals Analysis in Soccer**

2025

• Developed a Graph Attention Network with a novel attention mechanism to predict and interpret expected goals in soccer using PyTorch and StatsBomb data.

### Computer vision based artist attribution for sculptures

2025

• Implemented Prototypical Networks for artist attribution of sculptures, outperforming CNNs and Vision Transformers with a 0.8 F1-score. Supervised by Prof. Marco Raoul Marini.

### **SOFA: Step-on-Foot Analyzer for Football Refereeing**

Link 🗹 2025

• Built an automated system using YOLO and segmentation models to detect "step-on-foot" fouls in soccer, minimizing referee subjectivity. Supervised by Prof. Marco Raoul Marini.

### Technical Skills \_\_\_\_\_

**Programming Languages:** Python, C++, C, Java, JavaScript/TypeScript

Machine Learning & Computer Vision: PyTorch, TensorFlow, scikit-learn, OpenCV

Data Management: SQL, Pandas,

Tools & Platforms: Docker, Git/GitHub, Linux, LaTeX, Jupyter, NumPy, Matplotlib

# Languages \_\_\_\_\_

**Italian**: Native

English: Cambridge B2