Alessandro Soccol

M.Sc. in Artificial Intelligence and Research Assistant

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Work Experience

University of Cagliari | **Research Assistant** Cagliari, IT | August 2024 – Ongoing

- Presented a paper in the 18th ACM Conference on Recommender Systems with 1100+ participants.
- Involved in research activities and funding proposals.
- Mentored 1 B.Sc. student for his Bachelor's degree thesis.

University of Cagliari | **Research Intern** Cagliari, IT | Sept 2023 – July 2024

- Research Areas: Recommender Systems, Explainability, Natural Language Processing

Research Publications

Soccol, A, et. al. KGGLM: A Generative Language Model for Generalizable Knowledge Graph Representation Learning in Recommendation. In Proceedings of the **18th ACM Conference on Recommender Systems** (**RecSys '24**) [Paper] [GitHub]

Soccol, A., et al. hopwise: A Python Library for Explainable Recommendation based on Path Reasoning over Knowledge Graphs. In proceedings of the **34th ACM Conference on Information and Knowledge Management** (**CIKM '25**)[GitHub]

Education

M.Sc. in Artificial Intelligence (AI) - Excellence Program Cagliari, IT | Expected July 2026

University of Cagliari

- The Excellence Program provides funding for advanced courses and enrichment activities beyond the standard Master's curriculum.

B.Sc. in Computer Science Cagliari, IT | Sept 2021 - July 2024

University of Cagliari

- Graduated with honours.
- In the top 5% students.
- Work accepted in the 18th ACM Conference on Recommender Systems [Paper].

B.Sc. in Computer Engineering Gijón, ES | Jannuary 2024 - June 2024

University of Oviedo

- Won an Erasmus+ scholarship to study for a period abroad
- Knowledge gained in Network and Systems Architecture and Security of Networks and Services.

Projects

State-of-the-art python library for Recommendation Systems | *Python*, *PyTorch*

- Built a state-of-the-art python library that implement 20+ state-of-the-art Recommendation Algorithms published in Top Conferences. [GitHub]

Recommendation System for a Local Organization | *Python*, *PyTorch*

- Built a novel Recommender System algorithm that address the cold-start problem for the course recommendation in email newsletters.

A comparison of oversampling techniques using GAN and CycleGAN | *Python*, *Keras*, *Tensorflow*

- Conducted a comparative study of GAN and CycleGAN frameworks to enhance model performance. [GitHub]
- Generated 1,500+ synthetic data samples to improve a binary classifier's accuracy using Keras and TensorFlow.

Spam email classification using Machine Learning and Deep Learning | *Python*, *Scikit-Learn*, *imblearn*

- Built a binary classifier to detect spam emails using advanced machine learning techniques, achieving 96% accuracy. [GitHub]

Skills

Languages: Python, R, SQL, LaTex
Tools: PyTorch, Tensorflow, Keras, Huggingface Transformers, Pandas, Polars, Git, PostgreSQL, Docker, Git, AWS, Azure
Technical Skills: Machine Learning, Deep Learning, Graph Neural Networks, Data Mining, Statistics, Recommender Systems, Natural Language Processing, Reinforcement Learning, Graph Representation Learning, Data Structures and Algorithms, Knowledge Graphs
Volunteer: Student Volunteer at Italian Information Retrieval Workshop 2025