

MILANI FEDERICO

P H D S T U D E N T

(+39) 3490875084 · federico.milani@polimi.it · Milan, Italy · [linkedin.com/in/federico-milani](https://www.linkedin.com/in/federico-milani) · [milanif.it](https://www.milanif.it)

SUMMARY

I am currently concluding my PhD in Information Technology. I am just waiting for my thesis defense (around March 2023)! During my PhD I acquired a solid experience in data analysis, Artificial Intelligence (AI), and Computer Vision (CV). I applied my expertise to cultural heritage and remote sensing data. I have 4+ years of experience in Python scripting and software development and excellent knowledge of standard libraries (PyTorch, Numpy, Pandas, Scikit-learn, Pillow, Flask). I am a hardworking person with a practical approach to problem-solving, and I am looking for a challenging work environment and an opportunity to make the most out of my skills. In my free time, I love playing sports and learning new technologies.

SKILLS

TECHNICAL SKILLS Python | PyTorch | Tensorflow | Docker | Pandas | Flask | Linux | MacOS | Swift | NodeJS | Java | C++

OTHER SKILLS Team-working | Problem-solving | Open-mindedness | Reliability | Adaptability | Friendliness

WORK EXPERIENCE

RESEARCH ASSISTANT

Politecnico di Milano | Milan, Italy | February 2019 – January 2023

- Led the ArtDL project, developed a pipeline for analyzing Cultural Heritage data through Deep Learning-based components with potential use in interactive museums applications and improvement of online collections.
- Participated in processing and analysis of remote sensing data for multiple sensitive use-cases (e.g., illegal landfills identification, drone search and rescue).
- Co-authored 10+ publications in international journals and conferences.
- Co-supervised 10+ MSc students with thesis focused on Artificial Intelligence, Computer Vision, Evaluation Metrics, and Web Development.
- Assisted and tutored BSc and MSc courses for multiple academic years (2019 to 2023): Web Technologies, Data Bases 2.

EDUCATION

PhD in Information Technology | Politecnico di Milano, Italy

November 2019 – Present

Thesis title: "Analysis of Cultural Heritage Data for Complex Iconography Studies"

Research focus: Artificial Intelligence, Computer Vision, Multi-Label Image Classification, Weakly Supervised Object Detection

MSc in Computer Science and Engineering | Politecnico di Milano, Italy

September 2016 – December 2018

Thesis title: "Learning to Find Mountains"

PROJECTS

ArtDL ([website](#))

Python, PyTorch, Jupyter Notebook, Numpy, Pandas, Scikit-learn, OpenCV, BeautifulSoup

Created and released a public data set of 43k paintings, implemented and evaluated Deep Learning (DL) models for Christian iconography localization. Acquired expertise in web crawling, data preparation, data analysis, Deep Learning, Python, and its libraries.

ODIN ([website](#))

Python, Jupyter Notebook, Docker, Pandas, Plotly

Participated in developing an open-source framework assisting Machine Learning (ML) applications in the stages of data preparation, model evaluation, and error diagnosis. ODIN is entirely developed following python and unit testing best practices.

ODIN WEB

Python, Flask, Vue, Docker, MongoDB, Nginx

Led the development of the web version of the ODIN framework. ODIN WEB offers an intuitive VUE-based frontend, a Flask-based backend, and a NoSQL database. The environment can be easily set up through docker compose. ODIN WEB has yet to be published.

LANGUAGES

ENGLISH (ADVANCED), ITALIAN (NATIVE), GERMAN (BASIC), SPANISH (BASIC)