

# ANDREA GEMELLI

Ph.D. Candidate @ University of Florence | Machine Learning Scientist

 andreagemelli.github.io     gemelli.andrea@hotmail.com     +39 331 995 2716     andrea-gemelli     andreagemelli     Andr3aGemelli

## WORK EXPERIENCE

Ph.D. Candidate

University of Florence


 November 2020 - ongoing     Florence, Italy

My Ph.D. focuses on the application of **Graph Neural Networks** to **Document Understanding** and **Natural Language Processing** related tasks.

- I have been a **visiting researcher** at the **Computer Vision Center** for a year, developing the novel Doc2Graph framework in a joint project between our universities.
- I obtained the **Italian title of Engineer**, passing the bar exam with the **maximum score of 60/60**.
- I have been teaching "Introduction of Informative Systems" and "Fundamentals of Computer Science and Programming" during my second and third years, at the universities of Florence and Arezzo.

Data Science Internship

Alias2k

 Apr 2018 - Sep 2018     Montevarchi, Italy


At Alias2k I was able to learn how to work in a professional environment and how the technologies developed integrate between back-end and front-end.

- I applied **statistical machine learning** techniques to company's developed tools, improving their deterministic algorithms.
- The final work was personally presented to the CEO of Avesco Rent in Lausanne.

## ADDITIONAL EXPERIENCE

ELLIS Summer School

Cambridge University

 July 2022     Cambridge, UK

- I have been accepted at **Cambridge ELLIS Machine Learning Summer School**, selected among **130 participants out of 260 applicants**.
- I presented a poster about my Ph.D. ongoing work and attended lessons held by some of the most influential researchers in Deep Learning.

IAPR Summer School

Luleå University of Technology

 August 2021     Luleå, Sweden

- I took part to the **4th IAPR Summer School on Document Analysis**, a premier annual summer school focused on recent developments in document analysis
- I arrived **2<sup>nd</sup>** at the organized hackathon.

Erasmus+

Universiteit Gent - La Rochelle Université

 2019 - 2020     Ghent, Belgium - La Rochelle, France

- From January to April 2020, I wrote part of my master thesis during my stay at **L3i lab of La Rochelle University**, taking part to a traineeship international program.
- From September 2018 to February 2019, I had the opportunity to study at the **Ghent University**, one of the best universities in Europe. Among others, I took **Machine Learning** and **Software Hacking and Protection** courses.

## PUBLICATIONS

Full list of publications in my [Google Scholar](#) profile.

### Conference Proceedings

- **Andrea Gemelli**, Biswas, S., Civitelli, E., Lladós, J., & Marinai, S. (October 23-27, 2022). **Doc2Graph: a Task Agnostic Document Understanding Framework based on Graph Neural Networks**, Tel Aviv, Israel: **TiE @ ECCV22**.
- **Andrea Gemelli**, Vivoli, E., & Marinai, S. (August 21-25, 2022). **Graph Neural Networks and Representation Embedding for Table Extraction in PDF Documents**, Montréal, Québec: **ICPR22**.

### Journals

- Pisaneschi, L., **Andrea Gemelli**, & Marinai, S. (2022). **Automatic generation of scientific papers for data augmentation in document layout analysis**. *Pattern Recognition Letters*, 167, 38–44.

## EDUCATION

Master in Computer Science

University of Florence

 Sep 2017 – Sep 2020

**Thesis:** "Structural layout analysis of document images using Graph Convolutional Neural Networks"  
Grade: 110/110

Bachelor in Computer Science

University of Florence

 Sep 2014 – Sep 2017

**Thesis:** "Exploiting Convolutional Neural Networks for the detection of walls in floorplan images"  
Grade: 102/110

## GRANTS

- **Smart Computing** PhD Scholarship, funded by University of Florence and Regione Toscana
- **IAPR Research Scholarship**, funded by IAPR
- **IRCDL Student Grant**, funded by AIIA

## TECHNICAL SKILLS

### Programming Languages

Python  
C++



### Frameworks

Pytorch  
DGL  
Pandas  
Scikit-Learn



## LANGUAGES

Italian  
English  
Spanish

