

# Irene Cannistraci

PH.D. STUDENT IN COMPUTER SCIENCE

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## Education

### Sapienza University of Rome

PH.D. IN COMPUTER SCIENCE

- Laboratories: GLADIA (Prof. E. Rodolà) and VisionLab (Prof. D. Avola)

Rome, Italy

2021 - present

### Sapienza University of Rome

M.S. IN COMPUTER SCIENCE - GRADUATED WITH 110/110 CUM LAUDE

- Thesis: Time-Aware Sequential Deep Learning and Their Application in Healthcare

Rome, Italy

2019 - 2020

### Sapienza University of Rome

B.S. IN COMPUTER SCIENCE

Rome, Italy

2014 - 2017

## Experience

### Deep Learning and Applied AI course

TEACHING ASSISTANT

- Lecturer and mentor for the Deep Learning and Applied AI course

Rome, Italy

Feb 2023 - Jun 2023

### Fondazione Mondo Digitale

TEACHER

- Online coding lessons for high-school students for CO.ME.SE (COde&FraME for Self Empowerment) and CodinGirls Projects.
- Role Model for "La Notte dei Ricercatori 2020" and "STEM#4TeenGirls" the Erasmus+ Project for Scuole CEFA in Rome, Bilbao and Prague

Rome, Italy

Nov 2020 - Dec 2021

### NTT Data

SOFTWARE DEVELOPER ENGINEER

- RESTful APIs - Telecom
  - Develop a microservices architecture to revise an outdated monolithic platform for messaging. Scalability and high reliability were guaranteed by the Openshift platform, meanwhile real-time tracking and quick troubleshooting by Elasticsearch.
- Internal Portals (ServiceNow) - Enel
  - eProfile: employees use the service to create their profiles, insert their job-related information, and apply to open internal positions.
  - OneClick: employees adopt it to open issue tickets, request devices, software licenses, etc.
  - Global Travel: employees adopt it to insert travel requests.

Rome, Italy

Jun 2017 - Feb 2019

## Awards

Nov. 2022 **Avvio alla Ricerca - Sapienza University**, Research grant for young researchers and Ph.D. students.

€1000

Mar. 2022 **2021 Zonta International Women in Technology Scholarship** , Zonta International

\$8000

2014-2017 **Lazio DiSCo - Sapienza University**, Scholarship for academic merits to fully cover the B.S. tuition fees.

## Talks

### Invited Talk at "il Futuro Annunciato"

ITALIAN WORKSHOP FOR BACHELOR STUDENTS

Rieti, Italy

July 2023

### Invited Talk at the Artificial Intelligence Trento Journal Club

COMMUNICATING BETWEEN LATENT SPACES WITH LIMITED SEMANTIC CORRESPONDENCE

Trento, Italy

March 2023

### Invited Talk at Sapienza School of Advanced Studies (SSAS)

COURSE OF INTRODUCTION TO PROGRAMMING WITH PYTHON (PROF. E. RODOLÀ)

Rome, Italy

Jan 2023

### Invited Talk at Sapienza School of Advanced Studies (SSAS)

COURSE OF INTRODUCTION TO PROGRAMMING WITH PYTHON (PROF. E. RODOLÀ)

Virtual

Feb 2022

### Invited Panelist for WiDS Rome Event

WOMEN IN DATA SCIENCE ROME EVENT

Virtual

Jun 2021

### Invited Talk for Data Science Innovation in Diabetes Webinar

REAL DATA ARE OFTEN DIRTY DATA: PROBLEMS WITH THE ANALYSIS OF LARGE COLLECTIONS OF ELECTRONIC HEALTH RECORDS

Virtual

Jun 2021

## Scholarships for Conferences

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Jul 2023 **EEML** [↗](#), **EEML Scholarship**  
Jul 2022 **Synapse AI Symposium** [↗](#), **Bending Spoons Scholarship**  
Jun 2022 **Lightning DevCon** [↗](#), **Lightning Scholarship**  
Nov 2021 **ICAIF'21** [↗](#), **JPMorgan Fellowship**  
Oct 2021 **Festival Informatici Senza Frontiere** [↗](#), **Aused Fellowship**

*Kosice*  
*Milan*  
*New York City*  
*Virtual*  
*Rovereto (TN)*

## Professional Activities

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### Reviewer

22ND INTERNATIONAL CONFERENCE ON IMAGE ANALYSIS AND PROCESSING - ICIAP

*Jun 2023*

### Tutor

UNITELMA SAPIENZA - COMPUTER SCIENCE DEPARTMENT

*Nov 2021 - present*

- Help students learn more about the university and provide an interface between them and the professors.

### Reviewer

ACM TRANSACTIONS ON KNOWLEDGE DISCOVERY FROM DATA (TKDD) - JOURNAL

*Oct 2021*

### Collaboration with Sapienza Flight Team

SAPIENZA AEROSPACE STUDENT ASSOCIATION-AIAA STUDENT BRANCH

*Dec 2019*

- Developing a neural network for object detection and classification for the AUVSI SUAS 2020 Competition.

## Publications

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### Peer reviewed

- [Avo+23] D. Avola, **I. Cannistraci**, M. Cascio, L. Cinque, A. Diko, D. Distanti, G. L. Foresti, A. Mecca, and I. Scagnetto. "Real-Time GAN-based Model for Underwater Image Enhancement". In: *Image Analysis and Processing-ICIAP 2023: 22th International Conference, Udine, Italy, September 12–14, 2023*. Springer. 2023.
- [Can+23b] **I. Cannistraci**, L. Moschella, V. Maiorca, M. Fumero, A. Norelli, and E. Rodolà. "Bootstrapping Parallel Anchors for Relative Representations". In: *Tiny Paper Track at ICLR 2023*. 2023. URL: <https://openreview.net/pdf?id=VBuUL2IWlq>.
- [Avo+22] D. Avola, **I. Cannistraci**, M. Cascio, L. Cinque, A. Diko, A. Fagioli, G. L. Foresti, R. Lanzino, M. Mancini, A. Mecca, and D. Pannone. "A Novel GAN-Based Anomaly Detection and Localization Method for Aerial Video Surveillance at Low Altitude". In: *Remote Sensing* 14.16 (2022), p. 4110.

### Preprints

- [Can+23a] **I. Cannistraci**, M. Fumero, L. Moschella, V. Maiorca, and E. Rodolà. "Infusing invariances in neural representations". In: *Extended Abstract at TAG-ML workshop, ICML 2023* (2023). URL: <https://openreview.net/pdf?id=mCm4iiNoNc>.
- [Pra+23] M. Prata, G. Masi, L. Berti, V. Arrigoni, A. Coletta, **I. Cannistraci**, S. Vyetrenko, P. Velardi, and N. Bartolini. "LOB-Based Deep Learning Models for Stock Price Trend Prediction: A Benchmark Study". In: *arXiv preprint* (2023).
- [Mar+22] M. Maranghi, A. Anagnostopoulos, **I. Cannistraci**, I. Chatzigiannakis, F. Croce, G. Di Teodoro, M. Gentile, G. Grani, M. Lenzerini, S. Leonardi, et al. "AI-based Data Preparation and Data Analytics in Healthcare: The Case of Diabetes". In: *arXiv preprint arXiv:2206.06182* (2022).

## Projects Selection

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### A YouTube Player for Everyone

UNIVERSITY PROJECT

*Rome*

*A.Y. 2019/2020*

- A YouTube player designed and implemented to be accessible by deaf users, combining biometric and multimodal methodologies. Users can log in through a facial identification system, and an emotion recognition algorithm suggests playlists based on their mood. Then the user can interact with the player by using hand gestures and/or voice commands.

### BAS2Net

UNIVERSITY PROJECT

*Rome*

*A.Y. 2019/2020*

- Developing a new model that combines two state-of-the-art works in the Salient Object Detection field (BasNet and Res2Net). The resulting model requires 40% less training time, leading to better results on several datasets. Moreover, the proposed neural network is half the size of the original one.

## **Cervical Cancer Biopsia Response Classification**

*Rome*

UNIVERSITY PROJECT

*A.Y. 2019/2020*

- Development of several machine learning algorithms to detect cervical cancer based on the Biopsia response, using the Cervical cancer (Risk Factors) dataset.