

# Nicolo' Brandizzi

PhD student at Sapienza university of Rome.  
Researching Reinforcement Learning tied to Natural Language

"Follow the gradient"



## CONTACTS

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- 📍 Rome, Italy
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- 👤 Nicolò Brandizzi
- 📅 17/01/1995

## SKILLS

### Programming

- Python 8 year(s) ●●●●●●●●
- Bash 6 year(s) ●●●●●●●●
- LaTeX 6 year(s) ●●●●●●●●
- Matlab 2 year(s) ●●●●●●●●
- C++ 2 year(s) ●●●●●●●●
- HTML/CSS 1 year(s) ●●●●●●●●

### Frameworks

- Pytorch 3 year(s) ●●●●●●●●
- Numpy 5 year(s) ●●●●●●●●
- Tensorflow 2 year(s) ●●●●●●●●
- OpenCV 3 year(s) ●●●●●●●●

### Operating Systems

- MacOS 15 year(s) ●●●●●●●●
- Linux 7 year(s) ●●●●●●●●
- Windows 2 year(s) ●●●●●●●●

### Languages

- Italian Native
- English C1
- Spanish A1

## ABOUT ME

- Martial arts enthusiast
- RPG aficionado
- Drum player

## EDUCATION

- 📅 2020 - Ongoing 📍 Sapienza University of Rome, Italy

### PhD Engineering in Computer Science

- **Research Group:** I am part of the [Ro.Co.Co.](#) lab at [DIAG](#) ( Dipartimento di Ingegneria informatica, automatica e gestionale). My supervisor is [Luca Iocchi](#).
- **Research Visit at UvA:** I completed a 5 month scientific visiting period at Amsterdam university under the supervision of [Raquel Fernández](#).
- **Thesis Supervision:** I have provided supervision for several Master's students in their thesis writing.

- 📅 2018 - 2020 📍 Sapienza University of Rome, Italy

### M.Sc. of Engineering in Artificial Intelligence and Robotics GPA: 4/4 (110/110)

- **M.Sc. Thesis:** "Reinforcement Lupus: Cooperation through emergent communication in The Werewolf social deduction game", under supervision of Prof. Luca Iocchi.
- **10 months Erasmus:** University of Groningen, Netherlands.

- 📅 2015 - 2017 📍 Sapienza University of Rome, Italy

### B.Sc. of Computer and Autonomous System Engineering GPA: 2.97/4 (101/110)

- **B.Sc. Thesis:** "Comparison Between Segmentation Methods", under supervision of Prof. Luigi Freda.

## WORK EXPERIENCE

- 📅 10/2022 - Ongoing 📍 Middletown, 19709, USA (Remote)

### Research Scientist at Basis Health

I specialize in the analysis of wearable data for the purpose of improving personal health. To stay current in my field, I actively read and analyze relevant research papers, and collaborate with team members to develop new approaches and techniques for data analysis.

- 📅 07/2020 - 09/2022 📍 Sapienza University of Rome, Italy

### Teaching Assistant

I have held several teaching assistant positions, including for the courses *Tecniche di Programmazione* and *Seminars in Artificial Intelligence*. In these roles, I was responsible for leading discussions, providing support to students, grading assignments and exams, and facilitating a positive learning environment.

- 📅 07/2021 - 08/2021 📍 Sapienza University of Rome, Italy

### Occasional professional services

I authored a technical report on "Multi-agent Model Based Reinforcement Learning," showcasing my expertise in this field and demonstrating my ability to effectively communicate technical concepts and results.

## PUBLICATIONS

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1. Brandizzi, N. and Iocchi, L. (2022). Emergent communication in human-machine games. In *Emergent Communication Workshop at ICLR 2022*.
2. Brandizzi, N., Russo, S., Galati, G., and Napoli, C. (2022b). Addressing vehicle sharing through behavioral analysis: A solution to user clustering using recency-frequency-monetary and vehicle relocation based on neighborhood splits. *Information*, 13(11).
3. Brandizzi, N., Brunori, D., Frattolillo, F., Trapasso, A., and Iocchi, L. (2022a). Mixed human-uav reinforcement learning: Literature review and open challenges. In *The International Conference on Cognitive Aircraft Systems (ICCAS) 2022*.
4. Pepe, S., Tedeschi, S., Brandizzi, N., Russo, S., Iocchi, L., and Napoli, C. (2022). Human attention assessment using a machine learning approach with gan-based data augmentation technique trained using a custom dataset. 06(03):139.
5. Brandizzi, N., Russo, S., Brociek, R., and Wajda, A. (2021d). First studies to apply the theory of mind theory to green and smart mobility by using gaussian area clustering. In *ICYRIME Conference*, volume 3118, pages 71–76.
6. Brandizzi, N., Grossi, D., and Iocchi, L. (2021c). Rlupus: Cooperation through emergent communication in the werewolf social deduction game. *CoRR*, abs/2106.05018.
7. Brandizzi, N., Fanti, A., Gallotta, R., and Napoli, C. (2021b). Fefful: A few-examples fitness function learner. In *CEUR Workshop Proceedings*, volume 3092, pages 75–79.
8. Brandizzi, N., Bianco, V., Castro, G., Russo, S., and Wajda, A. (2021a). Automatic rgb inference based on facial emotion recognition. In *CEUR Workshop Proceedings*, volume 3092, pages 66–74.
9. Aureli, R., Brandizzi, N., De Magistris, G., and Brociek, R. (2021). A customized approach to anomalies detection by using autoencoders. In *CEUR Workshop Proceedings*, volume 3092, pages 53–59.

## ACHIEVEMENTS, HONOURS AND AWARDS

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- 🏆 2022 - Winner of scholarship for Representation mediated Multimodality [training school](#).
- 🏆 2021 - Winner of a research scholarship (bando per avvio di ricerca) at Sapienza University of Rome, Italy.
- 🏆 2021 - Spotlight paper in Adaptive and Learning Agents Workshop [[ALA21](#)] at AAMAS.
- 🏆 2020 - First classified for Ph.D. scholarship at Sapienza University of Rome, Italy.

## PEER REVIEW

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- 2023 **EACL:** The 17th Conference of the European Chapter of the Association for Computational Linguistics
- 2022 **CSAE:** The 6th International Conference on Computer Science and Application Engineering
- 2022 **Emergent Communication Workshop:** International Conference on Learning Representations [ICLR]

## CONFERENCES, SUMMER SCHOOLS & WORKSHOPS

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- 01/2023 Attendee at **ALiAS:** Amsterdam Lectures in Artificial Intelligence and Society
- 12/2022 Organizer at **Weights and biases Workshop:** Workshop at Sapienza University
- 09/2022 Attendee at **AI4UAM:** Representation mediated Multimodality
- 09/2022 Local Organizer at **Training School:** Artificial Intelligence for Urban Air Mobility

10/2021 Attendee at **ACAI**: The advanced course on AI on Human Centered AI

04/2021 Attendee at **ALA**: Adaptive and Learning Agents Workshop at AAMAS

## PROFESSIONAL EXPERIENCES

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 11/2021 - 10/2023  Rome, Italy

### PhD student representative

I serve as a liaison between the PhD student body and the administration, advocating for the needs and concerns of the students and working towards creating a positive and productive learning environment for all.

 06/2021 - 10/2023  Rome, Italy

### Member of the Department Council, DIAG, Sapienza University

I play a vital role in shaping the direction and policies of the department. I collaborate with fellow council members and department faculty to address concerns, implement initiatives, and make decisions that support the success and growth of the department and its students.



 09/2017 - 06/2018  Sapienza University, Rome, Italy

### Internship at Alcor Lab

As an intern on the European research project [TRADR](#), I contributed to the project's goals by coding the communication structure between the robots. Additionally, my participation in the review meeting in Mestre, Italy allowed me to gain exposure to a highly organized and collaborative work environment. This experience has further developed my ability to work effectively in a group setting.

## COMMUNITY ENGAGEMENT

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 12/2022 - Ongoing  Online


### Rising Researchers Network Kernel member

[CLAIRE](#) (Confederation of Laboratories for Artificial Intelligence Research in Europe) created a network for Ph.D. students interested in Artificial intelligence. After 10 months I got promoted to kernel member, the first line of contact between CLAIRE and our R2Net members.

 11/2021 - Ongoing  Rome, Italy



### Member of ADI association (Associazione dottorandi in Italia)

I am a volunteer at ADI which helps doctoral student around Italy.

 04/2018 - Ongoing  Rome, Italy

### Rotaract Club RTMM partner (socio)

I am an active member of the club, mainly working as an informatic consultant. Check out our [website](#)!

 01/2022 - 12/2022  Online

### Rising Researchers Network member

[CLAIRE](#) (Confederation of Laboratories for Artificial Intelligence Research in Europe) created a network for Ph.D. students interested in Artificial intelligence. I joined the R2Net and helped organizing partnerships, social events and summer schools.

 03/2021 - 10/2022  Rome, Italy

### Erasmus Student Network [ESN] partner (socio)

I helped with the overall organization events as well as connecting with incoming Erasmus students.

 06/2017 - 06/2018  Rotaract Club RTMM, Rome, Italy

### President of the Internal Commission

During this 12 months period I was responsible for the internal coordination between members and the organization of social events.