

# 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  
🏠 [nicofirst1.github.io](https://github.com/nicofirst1)  
🐦 @nicofirst1  
🌐 Nicolo' 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

## ACHIEVEMENTS, HONOURS AND AWARDS

- 🏆 First classified for Ph.D. scholarship at Sapienza University of Rome, Italy.
- 🏆 Spotlight paper in Adaptive and Learning Agents Workshop [ALA21] at AAMAS.
- 🏆 Winner of a research scholarship (bando per avvio di ricerca) at Sapienza University of Rome, Italy.
- 🏆 Elected as a member of the council of department (consiglio di dipartimento) at DIAG, Sapienza University of Rome.
- 🏆 Elected as the PhD Representative of my faculty.
- 🏆 Winner of scholarship for Representation mediated Multimodality [training school](#).

## ACADEMIC CAREER

### Teaching Assistant

- 02/2020 - 12/2021 - Tecniche di Programmazione
- 02/2020 - 12/2021 - Seminars in Artificial Intelligence
- 12/2021 - 09/2022 - Tecniche di Programmazione

### Supervised Master Students

- *Francesco Frattolillo*: Adaptive Playing and Opponent Modeling in Competitive Games
- *Abdolhadi Rezaei*: Hand Gesture and Voice Recognition on RaspberryPi
- *Luca Faraoni*: Multi agent model based reinforcement learning

### Other

- 01/07/2021 - 31/08/2021 - Contratto di prestazione occasionale : technical report on "Multi agent model based reinforcement learning"
- 01/04/2022 - 30/08/2022 - Scientific visit at University von Amsterdam [UvA] under the supervision of [Raquel Fernández](#), at the [ILLC](#) department
- 05/09/2022 - 09/09/2022 - Local Organizer for [AI4UAM](#) summerschool, at Sapienza university of Rome

## RESEARCH INTERESTS

Deep Reinforcement Learning [DRL]

Deep Neural Networks [DNN]

Vision model

Emergent Communication [Emcomm]

Natural Language Processing [NLP]

## PUBLICATIONS


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1. Brandizzi, N., Grossi, D., and Iocchi, L. (2021c). Rlupus: Cooperation through emergent communication in the werewolf social deduction game. *CoRR*, abs/2106.05018
2. 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
3. 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
4. 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
5. Brandizzi, N. and Iocchi, L. (2022). Emergent communication in human-machine games. In *Emergent Communication Workshop at ICLR 2022*
6. 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
7. Brandizzi, N., Brunori, D., Frattolillo, F., Trapasso, A., and Iocchi, L. (2022). Mixed human-uav reinforcement learning: Literature review and open challenges. In *The International Conference on Cognitive Aircraft Systems (ICCAS) 2022*

## PEER REVIEW

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### Emergent Communication Workshop

 International Conference on Learning Representations [ICLR]

 2022

 [website](#)

### CSAE

 The 6th International Conference on Computer Science and Application Engineering

 2022



 [website](#)

## CONFERENCES, SUMMER SCHOOLS & WORKSHOPS

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### ALA


 Adaptive and Learning Agents Workshop at AAMAS

 04/2021  Occupation: Attendee

 [website](#)


### ACAI

 The advanced course on AI on Human Centered AI

 10/2021  Occupation: Attendee

 [website](#)


### AI4UAM


 Artificial Intelligence for Urban Air Mobility

 09/2022  Occupation: Local organizer

 [website](#)

### Training School

 Representation mediated Multimodality

 09/2022  Occupation: Attendee

 [website](#)

## ABOUT ME

### Martial Arts enthusiast

- Muay Thai: 4 years
- Krav Maga: 2 years
- Taekwondo: 1 year

### Cat lover

- His name is Sky(net)
- Dogs are ok too

### RPG aficionado

- Dungeon & Dragons
- Call of Cthulhu
- Hades
- Skyrim

### Music is life

- Playing Drums
- Chill with Reggae
- Focus on Melodic metal
- Dance to ElectroSwing

### My favorite reads

- The Witcher saga is a must
- Not afraid of Freud
- Manga collector



## 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 locchi](#).
- **PhD representative:** I was elected for the academic year that lasts from November 2021 to October 2022.
- **Member of the Department Council:** I was elected for the academics years that last from June 2021 to November 2023.



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 locchi.
- **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.
- **Internship at Alcor Lab:** under supervision of Prof. Fiora Pirri.

## ⇌ ONGOING EXPERIENCES

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📅 01/2022 - Ongoing 📍 Online

### Rising Researchers Network Core team 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 now I'm part of the CORE team, organizing partnerships, social events and summer schools.

📅 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.

📅 11/2021 - 10/2022 📍 Rome, Italy

### PhD student representative

I was elected as the PhD representative of my faculty.

📅 06/2021 - Ongoing 📍 Rome, Italy

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

I was elected as a member of the Department Council where I know attend to organization matters.

📅 04/2018 - Ongoing 📍 Rome, Italy

### Rotaract Club RTMM partner (socio)

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

## ← PAST EXPERIENCES

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📅 03/2022 - 08/2022 📍 Amsterdam, Netherlands

### Scientific visit at UvA

I have been accepted as a scientific visitor at Amsterdam university under the supervision of [Raquel Fernández](#).

📅 03/2021 - 03/2022 📍 Rome, Italy

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

I help 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.

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

### Internship at Alcor Lab

- Worked as an inter on the European research project [TRADR](#).
- Took part in the last review meet in Mestre, Italy.

📅 06/2014 - 09/2013 📍 California, San Francisco

### Summer school camp

I attended an English course for the duration of 3 months.

📅 06/2013 - 09/2013 📍 California, Santa Barbara

### Summer school camp at UCSB

I followed college classes for 3 months.

📅 06/2012 - 09/2012 📍 California, Los Angeles

### Summer school camp at UCLA

I followed college classes for 3 months.