Nicolo' Brandizzi

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

"Follow the gradient"

CONTACTS

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- in Nicolò Brandizzi
- ⚅ 17/01/1995

SKILLS

Programming

Python 9 year(s)	●●●●●
Bash 7 year(s)	●●●●○
LaTeX 7 year(s)	●●●●○
Matlab 2 year(s)	●●●○○
C++ 2 year(s)	●●●○○
HTML/CSS 1 year(s)	●●○○○

Frameworks

Pytorch 4 year(s)	●●●●●
Numpy 6 year(s)	●●●●○
Tensorflow 2 year(s)	●●●○○
OpenCV 3 year(s)	●●●○○

Operating Systems

MacOS 16 year(s)	●●●●●
Linux 8 year(s)	●●●●●
Windows 2 year(s)	●●○○○

Languages

Italian	Native
English	C1
Spanish	A2
German	A1

ABOUT ME

- Martial arts enthusiast 6 year(s)
- RPG aficionado 12 year(s)
- Drum player 4 year(s)

🎓 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 (03/2022 - 08/2022) month scientific visiting period at Amsterdam university under the supervision of Prof. Raquel Fernández.
- **Thesis Supervision**: I have provided supervision for several Master's students in their thesis writing.
- **Research Visit at UBT**: I am currently enrolled in the University of Bayreuth as a Visiting Researcher for 6 months (04/2023 - 10/2023) under the supervision of Prof. Daniel Buschek.

📅 2017 - 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.
- **Erasmus Program**: I completed a 10 months (10/2019 - 08/2020) Erasmus program in the University of Groningen, Netherlands, under the supervision of Prof. Davide Grossi.

📅 2014 - 2017 📍 Sapienza University of Rome, Italy

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

- **Internship** : I completed a 7 months internship (05/2017 - 01 /2018) in the ALCOR Lab under the supervision of Luigi Freda working on the TRADR EU project.
- **B.Sc. Thesis**: "Comparison Between Segmentation Methods", under supervision of Prof. Fiora Pirri.

💼 WORK EXPERIENCE

📅 10/2022 - 04/2023   📍 Middletown, 19709, USA (Remote)

Research Scientist at Basis Health

I worked in the analysis of wearable data for the purpose of improving personal health. I read and analyzed relevant research papers, and collaborated 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 - 09/2021   📍 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.

🚩 ACHIEVEMENTS, GRANTS AND AWARDS

🏆 2023 - Awarded TAILOR Connectivity fund.

🏆 2023 - Awarded DSC 2023 Research Engineering Support Grant at University Van Amsterdam.

🏆 2022 - Recipient of scholarship for Representation mediated Multimodality training school.

🏆 2021 - Recipient of 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

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

07/2023   General Chair at **AI-Mind Workshop:** R2Net AI Research & Mental Well-Being Workshop 🔗

06/2023   Student Volunteer at **HHAI2023:** Conference on Hybrid Human-Artificial Intelligence 🔗

05/2023   Attendee at **AILC:** Lecture in Computational Linguistics 🔗

01/2023   Attendee at **ALiAS:** Amsterdam Lectures in Artificial Intelligence and Society 🔗

12/2022   Organizer at **Weights and biases Workshop:** Workshop at Sapienza University

10/2022   Attendee at **NVIDIA Workshop:** Building Transformer-Based Natural Language Processing Applications

09/2022   Attendee at **Training School:** Representation mediated Multimodality 🔗

09/2022   Local Chair at **AI4UAM:**   Artificial Intelligence for Urban Air Mobility   ⚯

05/2022   Speaker at **AIhub:**   New voices in AI   ⚯

05/2022   Speaker at **Lightning Talks:**   CLAIRE Rising Researchers Network   ⚯

01/2022   Attendee at **Winter School:**   DeepHealth Winter School   ⚯

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   ⚯

01/2021   Speaker at **Sapienza University of Rome:**   Machine Learning Seminars   ⚯

🏭 PROFESSIONAL EXPERIENCES

📅 11/2021 - 10/2023   📍 Sapienza University, 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   📍 Sapienza University, 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.

📅 07/2021 - 07/2022   📍 Rotaract Club, Rome, Italy

Save Your Life

I coordinated the Save Your Life project, which aimed to raise awareness about breast cancer prevention. I created and launched a website providing information on breast cancer prevention, early detection, and specialized treatment centers. Working closely with Professor Oreste Claudio Buonomo, the project developed a comprehensive campaign that included public events, educational materials, and social media outreach to encourage women to take steps to prevent breast cancer.

📅 11/2021 - 05/2022   📍 Rotary Club, Rome, Italy

Virgilio Project: Mentoring for Young Entrepreneurs and Start-ups

Participated in the Virgilio Project, a mentorship program aimed at supporting young entrepreneurs and start-ups in their early stages of development. As a mentee, I received guidance and support from a volunteer mentor with expertise in marketing, management, and finance. The mentorship experience helped me to gain valuable insights into the world of entrepreneurship, and provided me with the skills and knowledge necessary to successfully start and grow a business.

📅 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

📅 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)

As a member of ADI association, I have volunteered to support fellow doctoral students across Italy. My contributions have included assisting with various initiatives and programs aimed at improving the experience of doctoral candidates.

📅 04/2018 - Ongoing   📍 Rome, Italy

Rotaract Club RTMM partner (socio)

As an active member of the Rotaract Club RTMM, a community-based organization, I work as an informatics consultant, helping to design and implement technology solutions to support our club's various initiatives. Rotaract is a global organization that provides an opportunity for young professionals to network, develop leadership skills, and engage in service projects that promote positive change in their communities. As a Rotaract partner (socio), I am committed to supporting the club's mission and contributing to its efforts to create a better world through volunteerism and social responsibility. For more information about our club and our work, please visit 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)

As a member of the network, I contributed to the planning and coordination of various events while also serving as a liaison for incoming Erasmus students. Through my involvement with ESN, I gained valuable experience in event management and cross-cultural communication, and had the opportunity to meet students from all around the world.

📅 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.

📓 PUBLICATIONS

1. Brandizzi, N., Takmaz, E., Giulianelli, M., Pezzelle, S., and Fernández, R. (2023). Speaking the language of your listener: Audience-aware adaptation via plug-and-play theory of mind

2. Brandizzi, N., Fanti, A., Gallotta, R., Russo, S., Iocchi, L., Nardi, D., and Napoli, C. (2022b). Unsupervised pose estimation by means of an innovative vision transformer. In Rutkowski, L., Scherer, R., Korytkowski, M., Pedrycz, W., Tadeusiewicz, R., and Zurada, J. M., editors, *Artificial Intelligence and Soft Computing - 21st International Conference, ICAISC 2022, Zakopane, Poland, June 19-23, 2022, Proceedings, Part II,* volume 13589 of *Lecture Notes in Computer Science,* pages 3–20. Springer

3. Brandizzi, N. and Iocchi, L. (2022). Emergent communication in human-machine games. In *Emergent Communication Workshop at ICLR 2022.*

4. Brandizzi, N., Russo, S., Galati, G., and Napoli, C. (2022c). Addressing vehicle sharing through behavioral analysis: A solution to user clustering using recency-frequency-monetary and vehicle relocation based on neighborhood splits. *Inf.*, 13(11):511.

5. 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 Congnitive Aircraft Systems (ICCAS) 2022*.

6. 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.

7. 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.

8. Brandizzi, N., Grossi, D., and Iocchi, L. (2021c). Rlupus: Cooperation through emergent communication in the werewolf social deduction game. *Intelligenza Artificiale*, 15(2):55–70.

9. 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.

10. 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.

11. 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.