

Guido Putignano

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EDUCATION

- **ETH Zurich** Zurich, Switzerland
Master of Science - Computational Biology & Bioinformatics September 2023 - Now
Courses: Introduction to AI, Probabilistic AI, Computational Systems Biology, Machine Learning for Genomics, ImmunoEngineering
- **Politecnico di Milano** Milan, Italy
Bachelor of Science - Biomedical Engineering; Full Marks Honours September 2020 - July 2023
Honours in: Biochemistry, Control Theory, Telecommunications, Medical Informatics, Statistics, Biomechanics, CS

EXPERIENCE

- **MIT & Harvard University** Remote
Intern: PI: Domitilla del Vecchio & Thorsten Schlaeger (Part-time & Full-time) March 2023 - Now
 - **Image Processing:** Processed images using supervised machine learning methods for segmentation and labeling purposes
 - **Data Analysis:** Conducted statistical analysis on genetic data
 - **scRNA-seq & scATAC-seq analysis:** Studied RNA and ATAC data to elucidate cellular trajectories in immune cells.
- **ETH Zurich & Amgen Foundation** ETH - DBSSE
Amgen Scholar; PI: Barbara Treutlein (Full-time) July 2022 - September 2022
 - **Organoid Development:** Conducted research on brain organoids, focusing on their developmental changes over time.
 - **Image Processing:** Utilized supervised machine learning techniques to process images through segmentation and labeling processes.
 - **Data Analysis:** Analyzed lamin morphodynamics by employing statistical tests to quantify time fluctuations.
- **Nucleate** Remote
Managing Director: Italy (Full-time) December 2021 - Now
 - **Biotech Education:** Organized events aimed at fostering knowledge and expertise development in the field of biotechnology.
 - **Head of Research:** Established partnerships with VC firms, biotech labs, and academic institutions to promote collaboration and growth.
 - **Team Leader:** Managing a team of 30 people
- **World Economic Forum** Remote
AI Youth Council Representative of Italy (Full-time) November 2020 - July 2023
 - **Public discussions:** Worked with people at MIT, Salesforce, World Economic Forum and other organisations
 - **Develop Proposals in the field of AI:** Worked towards possibilities to make AI more ethical for younger generations.
 - **Writer:** Authored articles on the official website of the World Economic Forum, sharing insights and ideas on AI

PROJECTS

- **Cellgroup - A library to cluster and analyse cells in wells:** Developed a GitHub library for the analysis of cell images within well plates. (September '23)
- **Understanding human brain development and diseases: Lamin morphodynamics in brain organoids:** I analysed images using Python understanding lamin morphodynamics of brain organoids. (August '22)
- **Quantum Computation for Protein Folding Methods in the Healthcare Sector:** Research oriented to improve people's health by creating new drugs that can consider differences for women health. (August '21)
- **Protein Inactivation for Nociception for Chronic Pain:** Proposal to use Halogen Bonds and Supramolecular chemistry to inactivate the SCN9A protein to eliminate pain perception without losing other sensor functionalities. (February '21)

PUBLICATIONS

- **Book Chapter: The use of Computational Biology in Protein Engineering and Drug Discovery:** Guido Putignano, Nicola Marino, Evelyne Bischof, Alex Zhavoronkov, Quentin Vanhaelen (first and corresponding author, Elsevier)
- **Review: The use of computational and mathematical models for CAR-T Therapeutics:** Work describing several computational tools used to model and study CAR-T Therapeutics (First and corresponding author)
- **Review: Towards AI-driven Longevity Research: An Overview:** Nicola Marino, Guido Putignano, Emmanuele Chersoni, Antonella Santucci, Evelyne Bischof, Quentin Vanhaelen, Alex Zhavoronkov (November '21 - co-first author, Frontiers in Aging)
- **Overview: Synthetic biology for Entrepreneurs: Innovations in the Healthcare Sector:** Description of the main innovations and research activities in Synthetic Biology (December '20)

HONORS AND AWARDS

- Emerging Venture Fellow (\$15k), 2023
- Forbesu30 Italy, 2023
- Italian Excellence Prize - October, 2022
- Young Italy Prize - Italian Government - December, 2021
- Ermenegildo Zegna Scholar, 2023
- Person of the year "Healthcare" u25 - Bocconi University and Nova - October, 2022
- Fellow Foresight Institute, 2022
- Fellow at the Clinton Foundation - February, 2021