

LEONARDO POLLINA

ITALIAN, 24 YEARS OLD

CURRENT POSITION: GRADUATE RESEARCH INTERN IN KREIMAN LAB, HARVARD MEDICAL SCHOOL, CAMBRIDGE, MA, USA

RESEARCH INTERESTS:

My personal interest focuses on the desire to exploit the existing knowledge to engineer new cutting-edge solutions in the neuroprosthetics and brain-computer interfaces field, especially through the use of computational models for the decoding of brain or/and other physiological signals.

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Boston, MA, USA



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· EDUCATION

MASTER OF SCIENCE (M.Sc.) IN LIFE SCIENCES ENGINEERING

EPFL, Lausanne, Switzerland

09/2018 - **ongoing**

Specialization: Neuroscience & Neuroengineering

GPA: 5.66/6

ACADEMIC EXCHANGE (THIRD YEAR OF BACHELOR)

Aalto University, Helsinki, Finland

09/2017 - 06/2018

Department: Bioengineering and Biomedical engineering

BACHELOR OF SCIENCE (B.Sc.) IN LIFE SCIENCES ENGINEERING

EPFL, Lausanne, Switzerland

09/2015 - 06/2018

GPA: 5.25/6 (among the best 2% of 2018 graduates)

· RESEARCH EXPERIENCE

MASTER THESIS RESEARCH INTERN FOR EPFL – HARVARD BERTARELLI PROGRAM

Kreiman Lab, Harvard Medical School, Boston, MA, USA

03/2020 - **Ongoing**

Project title: "Task-dependent computational model of ventral visual cortex processing"

- Quantitative analyses of neurophysiological recordings (intracortical field potential signals) from human ventral visual cortex
- Development of computational models incorporating top-down feedback signaling carrying target and task information

Contact: Prof. Gabriel Kreiman

SEMESTER RESEARCH INTERN

Translational Neural Engineering (TNE) lab, EPFL, Lausanne, Switzerland

09/2019 - 02/2020

Project title: "Exploratory research of Deep Learning models for EMG decoding"

- Try different approaches to represent EMG data as images
- Build and validate several CNN-based Deep Learning regression models to predict the kinematic angle of each digit of the hand independently
- Analysis of generalization power of the models: intra-session performance vs inter-session performance vs inter-subject performance

Contact: Prof. Silvestro Micera

SUMMER RESEARCH INTERN

Aging in Vision and Action group, Vision Institute, Paris, France

06/2018 - 08/2018

Project title: "Spectral analysis of EEG data recorded in a divided visual attention task in young and elderly subjects"

- Spectral analysis (Event Related Spectral Potentials and Inter-Trial Coherence) of EEG data for the main frequency bands (theta, alpha, beta, gamma)
- Non-parametrical statistical comparison between young and elderly subjects

Contact: Dr. Angelo Arleo, Dr. Elisa Tartaglia

BACHELOR THESIS RESEARCH INTERN

Lingner Lab, EPFL, Lausanne, Switzerland

07/2017 - 08/2017

Project title: "Monitoring the efficiency of Cre-ERT2 mediated POT1 knock-out in 293E cell line"

- Learn to handle and to culture human cells
- Establish the optimal conditions for CreERT2-mediate POT1 Knock-Out
- Perform a time course experiment and a Cre-independent POT1 KO with CRISPR/Cas9 system.

Contact: Prof. Joachim Lingner, Dr. Galina Glusker

· TEACHING EXPERIENCE

STUDENT TEACHING ASSISTANT IN PROBABILITIES AND STATISTICS I&II

EPFL, Lausanne, Switzerland

02/2019 - 06/2019 and 09/2019 - 01/2020

Tutor for second year Bachelor's students in weekly exercise sessions.

Contact: Prof. Darlene Goldstein

STUDENT TEACHING ASSISTANT IN ADVANCED GENERAL CHEMISTRY

EPFL, Lausanne, Switzerland

09/2016 - 01/2017

Tutor for first year Bachelor's students in weekly exercise sessions.

Contact: Prof. Samuel Terrettaz

· TECHNICAL SKILLS

- PYTHON (libraries used: Tensorflow, Keras, Pandas, Pytorch, Brian, NumPy, SciPy, Scikit-learn)
- MATLAB (also confident with EEGLAB toolbox)
- SQL
- C++
- L^AT_EX

· FELLOWSHIPS & AWARDS

BERTARELLI FELLOWSHIP IN TRANSLATIONAL NEUROSCIENCE AND NEUROENGINEERING

EPFL Master students have the opportunity to apply for a fellowship allowing them to carry out their Master project within a Harvard Medical School-affiliated laboratory. The fellowship comprises an allowance of up to 30'000 USD for travel and living expenses in Boston, MA (USA).

Bertarelli Foundation - 02/2019

MOVETIA FELLOWSHIP FOR ACADEMIC EXCHANGE (THIRD YEAR OF BACHELOR)

Students participate to a competitive contest to be granted a fellowship allowing to carry out the third year of Bachelor in another university in Europe.

EPFL - 03/2017

AWARD FOR BEST FINAL GRADE FOR HIGH SCHOOL DEGREE

Liceo Scientifico U. Dini, Pisa - 07/2015

· LANGUAGES

ENGLISH: proficient

FRENCH: proficient

ITALIAN: mother tongue

· PERSONAL INTERESTS

TRAVELING, READING, WRITING