

ALESSANDRO LUSSANA

PHD STUDENT @ EUROPEAN BIOINFORMATICS INSTITUTE (EMBL-EBI)

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Website: <http://alussana.xyz>

ABOUT ME

Technical Skills Python, R, Rust, Bash, Awk, Sed, Git, Nextflow, Snakemake, Linux, Docker, Singularity

Languages English (C1 CEFR level), Italian (native)

Art Technology Inkscape, GIMP

Interests Data-driven Discovery, Automation, Reproducibility, Drug Development, DIY Robotics, Guitar, Judo

WORK EXPERIENCE

European Bioinformatics Institute (EMBL-EBI)

Predoctoral Fellow

Wellcome Genome Campus, Hinxton, UK (Oct 2021 - present)

- Developed a data-driven model of human cell signalling that outperforms state-of-the-art literature knowledge
- Supervisor: Dr. Evangelia Petsalaki

European Molecular Biology Laboratory (EMBL)

Staff Association Representative

Wellcome Genome Campus, Hinxton, UK (Apr 2023 - present)

- Elective role in an International Organisation
- Contributed to the relationship between Management and Staff, and to the functioning of the Organisation

IRCCS San Raffaele Scientific Institute

Research Fellow

San Raffaele Hospital, Milan, Italy (Oct 2020 - Jun 2021)

- Designed computational pipelines to handle and analyze bulk and single-cell RNA-seq data
- Supervisors: Prof. Matteo Iannaccone, Dr. Marco J. Morelli

Tampere University

Research Assistant

Arvo Building, Tampere, Finland (Feb 2020 - Sep 2020)

- Adapted deep learning models to analyze chromatin accessibility data from prostate cancer samples
- Supervisor: Prof. Matti Nykter

University Of Turin

Student Trainee

Molecular Biotechnology Center, Turin, Italy (Apr 2017 - Sep 2018)

- Developed a software package to analyze human genetic variation and its effect on gene expression
- Supervisor: Prof. Paolo Provero

EDUCATION

University Of Cambridge

Cambridge, UK (Oct 2021 - present)

- PhD in Biological Sciences, EMBL International Predoctoral Programme
- Institution-level Admission Rate: 2.7%. Unit-level Admission Rate: <1%

University Of Bologna

Bologna, Italy (Oct 2018 - Sep 2020)

- International M. Sc. in Bioinformatics
- Weighted Average: 29.09/30.00. Final Graduation Mark: 110/110 Cum Laude

University Of Turin

Turin, Italy (Oct 2015 - Jul 2018)

- B. Sc. in Biotechnology
- Weighted Average: 28.3/30.00. Final Graduation Mark: 110/110 Cum Laude

PUBLICATIONS AND PROJECTS

- Software Package** (2023)
- [TrieSUS](#), an efficient algorithm to find the Smallest Unique Subset (SUS)
- Personal Project** (2022)
- Personal website and blog, <http://alussana.xyz>
- Research Project** (2021)
- Prediction of gene expression from regulatory sequence composition enhances transcriptome-wide association studies
- Personal Project** (2020)
- [WebXiv](#), an NGINX web server running in a Docker container for remote file access
- Research Project** (2020)
- Chromatin accessibility analysis uncovers regulatory element landscape in prostate cancer progression
- Curricular Project** (2019)
- A Support Vector Machine-based Method To Accurately Predict Protein Secondary Structure
- Software Package** (2018)
- A functional approach to impute Genetically Regulated Expression