

# ALESSANDRO LUSSANA

PHD STUDENT @ EUROPEAN BIOINFORMATICS INSTITUTE (EMBL-EBI)

alussana@ebi.ac.uk

+44 7424530080

Website: <http://alussana.xyz>

## ABOUT ME

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**Technical Skills** Python, PyTorch, R, Bash, Awk, Sed, Git, Nextflow, Snakemake, Linux, Slurm, Docker, Singularity  
**Languages** English (C1 CEFR level), Italian (native)  
**Art Technology** Inkscape, GIMP  
**Interests** Data-driven Discovery and Decision Making, Automation, Drug Discovery, DIY Electronics, Guitar, Judo

## WORK EXPERIENCE

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### European Bioinformatics Institute (EMBL-EBI)

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

- Develops data-driven models of human cell signalling to explain context-specific cellular responses
- Supervisor: Dr. Evangelia Petsalaki

### European Molecular Biology Laboratory (EMBL)

Staff Association Representative Wellcome Genome Campus, Hinxton, UK (Apr 2023 - Apr 2024)

- 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 Iannacone, 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

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### University Of Cambridge

Cambridge, UK (Oct 2021 - present)

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

### 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

## PROJECTS AND PUBLICATIONS

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- Research Project** (2024)
  - [PhosX](#): data-driven kinase activity inference from phosphoproteomics experiments
- Algorithm** (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