

# Edoardo Insaghi

[25 y/o MSc student]

OMISSIS  LinkedIn OMISSIS  OMISSIS  Trieste, Italy

## Education

- Enrolled in the [Data Science and Artificial Intelligence](#) MSc @ [UniTs](#) & [SISSA](#) since September 2023. The degree focuses on teaching modern concepts and practices in machine learning and data analysis, blending practical applications of AI with a strong mathematical foundation. Current weighted average: 29.7 / 30
- Bachelor's degree in [Statistics and Informatics](#) @ UniTs, concluded in July 2023. The program is centered around the mathematical foundations of classical statistics, with additional training in programming across various languages and an introduction to mathematical finance. Final grade: 110 / 110 cum laude.

## Academic Research Experience

### [Cancer Data Science Laboratory](#)

[Research group at the [University of Trieste](#)]

- Collaborated with PhD students and postdocs during my bachelor's thesis project.
- We developed a **tool for differential expression testing** of genes measured by single-cell sequencing technologies.
- Using probabilistic programming in Pyro, we framed the model as a **Bayesian Negative Binomial generalised linear model** trained with **variational inference**.
- My key responsibilities involved testing the statistical model and analysing single-cell RNA sequencing data and regularly presenting findings and progress to the research team.
- Strengthened skills in statistical analysis, scientific communication, and team collaboration in a research-focused setting.
- Contributed to a paper on the model, currently under development.

## Industrial Research Experience

### [eXact Lab](#) (intern)

[Technical Consulting Firm in HPC and AI]

- Developing a **real-time defect detection algorithm** for 2D profiles of industrial objects using neural networks tailored for **2D point cloud data**.
- Optimised deep learning model inference speed to meet stringent time constraints of **200 microseconds per frame**.
- Trained on **model acceleration techniques** to enhance performance.
- My responsibilities include conducting independent work to design and implement solutions and collaborating with team members to ensure the algorithm meets accuracy and efficiency standards required in industrial settings.

## Relevant Skills

- Familiarity with different programming languages, including **Python, R, C** and **C++**
- Experience with training **deep learning models** on computational clusters and accelerators

## Language Assessment

- Italian native speaker
- CAE Cambridge C1 English Certification

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