

# ANDREA COGNOLATO

[andreco@hotmai.it](mailto:andreco@hotmai.it) ♦ [mrandri19.github.io](https://mrandri19.github.io) ♦ [linkedin.com/in/andrea-cagnolato](https://linkedin.com/in/andrea-cagnolato)

## EDUCATION

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**Master of Data Science and Engineering**, Politecnico di Torino Sept. 2020 - July 2022  
Graduated with 110/110 cum laude.

**Erasmus Exchange Program**, Aalto University, Finland Sept. 2021 - June 2022  
Thesis title: “Learning Individualized Treatment Response Curves with Bayesian Nonparametrics”

**Bachelor of Computer Engineering**, Politecnico di Torino, Italy Sept. 2017 - July 2020  
Graduated with 110/110 (Top 1% in my class), supported by a full scholarship.

## WORK EXPERIENCE

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**Software Engineer Intern, Optiver** July 2021 - August 2021

- Optimized, tested, and deployed a batch processing job for the compliance tech team, reducing its runtime by 8x. To achieve this I wrote **high-performance C++** and created **Python bindings**.
- Gave technical and introductory presentations of my work, to my team and company-wide audiences.
- Learned about financial markets, high frequency trading, market making, and option theory.

**Software Engineering (freelance), Ufficio.ch** March 2020 - Now

- Developed the frontend and backend for an eCommerce platform using **Haskell** and **PureScript**.
- Wrote design docs, collaborated with contractors, maintained legacy open-source libraries.
- Improved latency and operating cost by refactoring parts of the main monolith to **AWS Lambda**.

**Machine Learning Research Intern, Politecnico di Torino** October 2019 - March 2020

- Worked under prof. Elena Baralis on the **eXplainable AI (XAI)** frameworks LACE and X-PLAIN. This work was **published at SIGMOD20**. Optimized Python code improving runtime by over 50%.

**Freelance Software Engineer, Multiple Clients** September 2017 - 2019

- Worked in over 10 projects, achieving “Top Rated” status on the Upwork marketplace.

## OTHER EXPERIENCES

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**Blogging** (more at [mrandri19.github.io/blog](https://mrandri19.github.io/blog))

Wrote several posts for my blog which reached the front page of Hacker News and Reddit’s /r/programming. Several articles were read by more than 10,000 people and keep generating traffic years later.

**Open Source** (more at [github.com/mrandri19](https://github.com/mrandri19))

Wrote and shipped the GTK Linux backend for the Druid UI Framework.

Improved documentation, fixed bugs, and implemented multivariate polynomials for Surrogates.jl.

**MALTO (MACHINE Learning at poliTO)**, Founding Member Sept. 2020 - Now

Co-founded my university’s competitive ML team. Took part in Kaggle TPS, Twitter RecSys 2021.

**Citadel Summer Invitational Datathon** July 2020

Our team performed data analysis and quantified the effect of 2012 London Olympics on the Growth Boroughs’ housing market using a causal inference method called Synthetic Control.

## AWARDS

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**“Giovani Talenti” Program**, Politecnico di Torino Sept. 2017 - June 2020  
**1st place - Provincial Informatics Olympiad** Fall 2016