

# ANDREA COGNOLATO

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## EDUCATION

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**Master of Data Science and Engineering**, Politecnico di Torino      Sept. 2020 - Exp. July 2022

**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 (part-time), 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 reduced 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 LACE and X-PLAIN frameworks for explaining the predictions of black-box classifiers. This work was **published at SIGMOD20**.
- Developed and optimized scientific Python code improving running time by over 50%. Wrote a production-ready library from Jupyter notebooks and built an interactive web demo.

**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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**Citadel Summer Invitational Datathon**      July 2020

Our team quantified the effect of 2012 London Olympics on the Growth Boroughs' housing market using a statistical method called Synthetic Control.

**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. Some 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.

## AWARDS

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**Young Talents Program (Politecnico di Torino)**      September 2017 - 2020

Excellence program reserved to the top 3% of the students of each academic year.

**1st place - Provincial Informatics Olympiad**      Fall 2016