Edoardo **Debenedetti**

MSc Student in CS @ EPFL

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Education

EPFL - Federal Institute of Technology Lausanne
Lausanne, Switzerland

MSc in Computer Science
Sep. 2019 - Mar. 2022 (Expected)

- **GPA 5.41/6**, focus on **Machine Learning** ∩ **Security** ∩ **Privacy**.
- Working on a standardized benchmark for **Adversarial Robustness** at **Prof. Flammarion**'s TML Lab.
- Worked on a **research** project about **deepfakes** counteraction via influence functions at **Prof. Troncoso**'s SPRING Lab.

PoliTo - Turin Polytechnic University
Turin, Italy

BSc in Computer Engineering
Sep. 2016 - Jul. 2019

- **GPA 28.4/30**, graduation mark 110/110, **top 9%**.
- **Exchange year at** 同济大学 (Tongji University), in Shanghai (China), supported by a **full scholarship** granted to the top 31% applicants.

Navy Military College "F. Morosini"
Venice, Italy

High School Diploma
Sep. 2013 - Jul. 2016

- Selected to lead sophomores as **prefect** during my final year.
- **Military training** on Italian Navy's Ships and at Italian Navy's Marine Corps.

Experience

Bloomberg LP
London, UK

Software Engineering Intern
Jul 2021 - Sep. 2021

- Incoming Software Engineering Intern, project TBD in the next few months.

armasuisse Cyber-Defence Campus
Lausanne, Switzerland

Research Intern
Aug. 2020 - Feb. 2021

- Conducted research about **Machine Unlearning** and **Membership Inference Attacks** against Generative Models under the supervision of **Dr. Mathias Humbert**. Tools: **PyTorch**, **PyTorch Lightning**, **Comet ML**, and **Python**.

Reply
Turin, Italy

Software Engineering Intern
Nov. 2018 - Feb. 2019

- Developed a **chatbot** that answers questions about GDPR law, using **TypeScript**, **Redis**, **MongoDB**, **IBM Watson Assistant**, and **Docker**.
- Worked on **RPA**, using **Python**. One of the bots I developed **decreased a task duration by 88%,** without requiring human intervention in it.

Projects

Counteracting DeepFakes
Graded 5.75/6

- Term **Research Project** run at Prof. Troncoso's SPRING Lab at EPFL.
- Attempt to run **poisoning** attacks via **Influence Functions** (by Koh et al.) to counteract DeepFakes training.
- The attack was tested on MNIST-trained **autoencoder** and shown **major distortions** in the decoder outputs after the poisoned training.
- Stack: **PyTorch**, **TensorFlow** and **Keras**, on top of **Python**.

NeurIPS 2019 Reproducibility Report
Graded 6/6

- Reproducibility report of a NeurIPS 2019 paper about **black-box adversarial attacks against ML models**, submitted to the NeurIPS 2019 Reproducibility Challenge.
- With our re-implementation we **reduced by 76% the median attack time** wrt the paper. Stack: **Python**, **PyTorch**, LaTeX.

Extra

JEToP (PoliTo's Junior Enterprise)
Turin, Italy

International Manager
Oct. 2018 - Jun. 2019

- **Executive board** member responsible for external relations of the Junior Enterprise. Signed **8 new partnerships.**
- Past positions (since Oct. 2016): Fundraising & Partnership Assistant, IT Consultant.

LeadTheFuture

Mentee
Sept. 2019 - Current

- Selected to be part of the **leading mentorship organization for STEM students in Italy** - Acceptance rate < 20%.
- Held a **mentoring session** about MSc admissions at EPFL.

Languages

- **English**: Fluent, TOEFL iBT 108/120, C1.
- **Italian**: Native speaker.
- **French**: Intermediate.