ANDREA SGOBBI

Computer Science MSc Student

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SUMMARY

Computer Science MSc Student at ETH Zürich, currently a research intern at Boston Dynamics' RAI Institute. Passionate about Robotics, Machine Learning, and Mixed Reality, with a strong foundation in Rust and Python.

SKILLS

Languages: Rust, C/C++, Python, Java, C#, JS/TS, HTML, CSS, SQL.

Technologies: Linux, Git, PyTorch, ROS, Unity, Docker, Kubernetes.

EXPERIENCE

9/2025 - Current **Research Intern** — **RAI Institute**
Working on porting the software stack developed for Atlas and UMV to the Spot robot.

EDUCATION

9/2023 - Current **Computer Science MSc** — **ETH Zürich**
Machine Intelligence Major, Data Management Systems Minor
Current GPA: **5.78/6**
Relevant Courses: *Deep Learning, Computer Vision, 3D Vision*

9/2020 - 7/2023 **Engineering of Computing Systems BSc** — **Politecnico di Milano**
Graduated with **110 Cum Laude** and a **29.52/30** GPA.
Engaged in course administration activities as a student representative.
Relevant Courses: *Software Engineering, Robotics, Electronics*

9/2015 - 7/2020 **Liceo Scientifico** — **Liceo Statale M.G.Agnesi**
Graduated High School with **100/100**

PROJECTS

Research **Semester Thesis: *"Sparse-View 3D Shape Generation"***
- Investigating 3D shape generation from multiview inputs using state-of-the-art ML models for geometry estimation of hand-scale objects.
- Experimenting with large-scale 3D dataset generation and processing.
- In collaboration with **Google Research** and the **Autonomous Systems Lab (ASL)** at ETH Zürich.

Research ***"Holospot: Intuitive Object Manipulation via Mixed Reality Drag-and-Drop"*** — **holospot.github.io**
- Developed a novel system integrating a Mixed Reality headset with the Spot robot from Boston Dynamics.
- Enabled users to intuitively control the robot using simple drag-and-drop gestures to perform the complex task of grabbing and placing real-world objects.
- Submitted to ICRA 2025 in the Human-Centered Robotics and Automation category.
- In collaboration with the **Computer Vision and Geometry Lab (CVG)** at ETH Zürich.

Computer Chess **Carp** — **github.com/dede1751/carp**
- A superhuman chess engine written in Rust, reached world **Top-10** in CCRL Blitz with 3508 ELO.
- Competed among the strongest engines in the world in various tournaments/rating lists such as Chess.com Computer Chess Championship, CCRL, CEGT, and IPManChess.
- Utilizes a combination of traditional heuristic tree search and a Neural Network trained through Reinforcement Learning with self-play data.
- Also distributed as a WebAssembly package to be used entirely within any browser (see my website).

AWARDS

2022 **Best Freshmen Award** — **Politecnico di Milano**
Grant awarded to the best performing first year students at Politecnico di Milano.

2019 **Finalist at "Gran Premio della Matematica Applicata"** — **Università Cattolica del Sacro Cuore**
Participated in the final round of the Applied Mathematics competition hosted by UniCatt.

2018 **"Snack News a Scuola" Winner** — **Università Bocconi & Corriere della Sera**
Collaborated in the production of the prize-winning divulgative video for the competition hosted by Bocconi and Corriere della Sera.