

Samuele Nicolò Straccialini

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Overview: AI Master's student at Bocconi, passionate about building projects and learning fast through experience. I've led teams in applied AI and developed end-to-end pipelines across computer vision, NLP, LLM/RAG systems, and time-series forecasting. I also enjoy building personal projects, including websites and mobile applications.

Education

Master's in Artificial Intelligence

Sep 2025 – Jul 2027 (expected)

Università Commerciale Luigi Bocconi, Milano (MI), Italy

- *Relevant Coursework:* Computer Vision, Language Technology, Software Engineering, Optimization, Reinforcement Learning.
- Current GPA: 29.3/30

Bachelor's in Mathematical and Computing Sciences for Artificial Intelligence

Sep 2022 – Jul 2025

Università Commerciale Luigi Bocconi, Milano (MI), Italy

- Final Thesis: An exploration of novel heuristics for efficient and accurate k-means clustering – Final grade: 110/110
- *Relevant Coursework:* Analysis, Algorithms and Data Structures, Machine Learning, Deep Learning, Stochastic Processes.

Exchange Program

Sep 2024 – Dec 2024

University of Wisconsin-Madison, Madison (WI), U.S.

- *Relevant Coursework:* Theory of Programming Languages, Cryptography, Dynamical Systems, PDEs, Game Theory, Physics
- GPA: 3.92/4.00

Experience

AI4I – The Italian Institute of Artificial Intelligence for Industry

Torino (TO), Italy

- Incoming Research Intern

Starting Mar 2027

Bocconi University

Milano (MI), Italy

- Research Assistant

Oct 2026 – Present

Developing 4D scene embeddings linking actions and semantics to spatiotemporal information in egocentric videos.

Amazon

Luxembourg, Luxembourg

- Software Development Engineer Intern

Jun 2026 – Aug 2026

Built and deployed an end-to-end agentic AI system to production in 2 months for global fulfillment optimization.

Tech: Python, JavaScript, React, AWS, REST APIs, testing, CI/CD, Docker, system design.

Hephaestus Applied Artificial Intelligence Association

Milano (MI), Italy

- President

Sep 2025 – Sep 2026

Led an 80+ member AI association, coordinating activities, events and media while increasing applications by 30%.

- Head of Project

Feb 2024 – Sep 2025

Brain2Img: Reconstructed visual experiences from brain activity using DL, Bayesian inference, and diffusion models.

Automatic Quiz Scoring: Built an end-to-end pipeline for grading handwritten answers, achieving 80% accuracy.

Tech: Python, PyTorch, scikit-learn, OpenCV, SVM, PCA, fMRI, SQL, Git, PHP.

UW-Madison Association Playing for Real

Madison (WI), U.S.

- Game Developer

Sep 2024 – Jan 2025

Collaborated with a 20-person team to develop a deck-building video game using Unity and C#.

Tech: Unity, C#, Git, Object-Oriented Programming.

Achievements

- ICPC SWERC 2025 programming competition: Ranked among the top 50 teams.

Selected Projects

- **ASO-Temba** | Tech: Python, PyTorch, Mamba/SSMs, Transformer attention, I3D/CLIP features, TSU/Charades.

Improved a Mamba-based model for temporal action detection in long videos by up to +3.48 mAP points. Enabled zero-lookahead streaming inference, with only a 0.97–3.08 mAP-point drop relative to the original offline architecture.

- **How Do Italian Varieties Behave in Embedding Spaces?** | Tech: Gensim, XLM-R, CANINE, LaBSE, data cleaning.

Benchmarked 6 embedding families across 17 language varieties, revealing that character TF-IDF outperforms pretrained Transformers in recovering linguistic relationships (Spearman $\rho = 0.905$).

- **SuBert** | Tech: Python, PyTorch, Hugging Face Transformers, BART, GPT-2, YOLO, Faster R-CNN.

Developed an end-to-end Computer Vision and Transformer pipeline to translate Sumerian cuneiform; achieved 0.775 mean semantic similarity demonstrating effective cross-lingual understanding despite data scarcity.

Skills

- **Programming:** Python, JavaScript, C, C#, Flutter (Dart), HTML, CSS, Haskell, R, MATLAB, SQL

- **Tools & Software:** Git, LaTeX, Microsoft Office, Microsoft Access, Power Query

- **Languages:** Italian (Native), English (Advanced C1), French (Intermediate B1)

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