DAVIDE GABRIELLI

M.Sc. Student in Computer Science at La Sapienza University of Rome

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PROFILE

I am pursuing a Master of Science in Computer Science at La Sapienza University of Rome.
While doing my Bachelor's Degree I developed a strong interest in machine learning and audio signal processing.
Now in my Master's Degree I am focusing on these topics and I want to improve my knowledge by working in the audio AI research field. I am open to a full-time internship with an immediate start date and I am willing to relocate.

EDUCATION

Master's Degree in Computer Science
La Sapienza, Rome

09/2022 – Present (Exp. Graduation: 10/2024) — **Current GPA: 29.5/30**

In my master's degree I am focusing on deep learning and related research areas such as computer vision, NLP and audio AI.

Bachelor's Degree in Computer Science
La Sapienza, Rome

09/2019 – 10/2022 — **110/110 with honors**

In my bachelor's degree I studied a wide range of topics, particularly focusing on algorithms and data structures, computer architecture, operating systems, databases, networks and software engineering.

Secondary School Diploma in IT
ITIS E. Fermi, Rome

09/2014 – 07/2019 — **100/100 with honors**

In my high school I studied basics of programming, networking, databases and web development.

PROJECTS

Boosted AI
Linkedin

2023 – Present — **Startup**

Boosted AI is a startup dedicated to integrating generative AI into the educational field, offering students a personalized learning experience. The project has been selected in the Google for Startups Accelerator.
I currently serve as the Chief Technology Officer (CTO) and AI Specialist, specializing in the field of Natural Language Processing (NLP).

Music Source Separation with DDSP
Github

2024 — **Exam Project**

I implemented a novel approach for Music Source Separation using the Audio Spectrogram Transformer for regression on the parameters of Differentiable Digital Signal Processing with additive synthesis.

Instrument Cloning with Pix2Pix
Github

2023 — **Exam Project**

In order to gain proficiency in utilizing big data frameworks such as Apache Spark and Petastorm, I developed a Google Colab notebook that allows to train a Pix2Pix model able to learn the timbre of instrument and generate new samples using MIDI information.

Voice Conversion using Reduced Spectrum
Github

2022 — **Bachelor's Thesis**

For my bachelor's thesis I conducted research and developed a novel approach for voice conversion based on state-of-the-art architecture using a spectrum-reduced representation of mel-spectrograms as input. This work was carried out with the collaboration of the VisionLab research team.

LANGUAGES

Italian ●●●●●

English ●●●●○

PROGRAMMING LANGUAGES

Python | C++ | Java | Javascript

TECH SKILLS

- **Deep Learning:** Pytorch, Tensorflow
- **Data Analysis:** Pandas, Numpy, SciPy, Matplotlib
- **Big Data:** Apache Spark, Petastorm
- **Audio Processing:** Librosa, torchaudio, DDSP
- **Version Control:** Git
- **Database:** PostgreSQL, MongoDB, MySQL, SQLite
- **Server:** Linux, Apache, Nginx, Docker, Traefik