## Education

Bocconi University, BSc in Computer Science & Artificial IntelligenceSep 2021 – 2025Main Coursework: Mathematical Analysis and Optimization, Advanced Programming, Statistics, Machine LearningThesis: Multi-Stage Anonymized Video Synthesis Using GAN-Based Motion Transfer

# **Knowledge and Skills**

Machine Learning: Deep Learning, Neural Networks, Face & Video Generation, Ensemble Methods, Object Detection Knowledge: Computer Vision (GAN, Diffusion, ControlNets, StableDiffusion, CLIP), NLP (RAG, Fine-Tuning LLMs) Skills: Python (Pandas, Scikit-learn, TensorFlow, Keras, PyTorch, OpenCV), Docker, C, R, SQL, PowerBI, QuickSight Languages: English: Fluent, Turkish: Native, Italian: Intermediate

## **Working Experience**

#### INRIA – STARS Team

Al Researcher Intern – Computer Vision

- Designed a new **GAN-based motion transfer** architecture by implementing new loss functions for accurate eye and lip retargeting along with custom face anonymization with **StableDiffusion** via **ControlNets**.
- Fine-tuned a facial landmark detection model to determine precise injection points and techniques for Botox and filler treatments, providing a baseline to assist professionals to achieve optimal outcomes.
- Conducted research on **GAN inversion** to map generated images back to **StyleGAN3** latent space, manipulating a face identity space for better understanding and control of facial features preserving background and pose features.

#### Amazon.it

Business Intelligence Engineer Internship

- Designed GameX WBR by developing SQL queries to data cluster, optimizing existing ones that resulted in decrease in run time by >%30.
- Developed automated Excel reports and Quicksight dashboards using job schedules to track KPIs
- Created an **ML pipeline** by implementing **BERTopic** on Amazon.it TrustPilot comments to analyze pain points of customers.
- Designed Pricing Dashboards with competitiveness and coverage metrics and conducted competitor analysis for Portugal

#### Runibex Technology Group

Business Intelligence Internship

- Utilized technical skills in SQL, Analysis Services (SSAS), ETL and PowerBI.
- Created dashboards on PowerBI to monitor cash flow and verify the alignment of on-site purchases.

### **Main Projects**

### Head Anonymization with Realistic Vision v5.0 via ControlNets

- Implemented head segmentation and lineart images to provide structured guidance for ControlNet
- Integrated **DeepFace** for age, gender, and race extraction to generate attribute-consistent prompts.
- Used RealisticVisionv5.0 weights for inpainting and validated anonymization using a cosine distance threshold of 0.6

### Face Generation using VAE and GANs

- Developed a Variational Autoencoder (VAE) to learn and represent latent features of facial images
- Implemented a Generative Adversarial Network (GAN) with varying settings to generate facial images.
- Trained both models on the CelebA dataset, improving the quality of generated images.
- Compared the performance of VAE and GAN, analyzing the quality and diversity of generated faces.

## Sophia Antipolis, France

Nov 2024-Apr 2025

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Milan, Italy

Jun 2023–Dec 2023

Istanbul, Turkiye

Jun 2022–Aug 2022