Marius Dragic

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Linkedin Github

Education

CentraleSupélec, Gif-sur-Yvette, France — *2022 – 2025*
Master's-level Engineering Degree (*Grande École*)
Major: **Data Science (SDI)** — Track: **Math Modeling (MDS)**

- **GPA:** 4.0/4.0 (**Top 1%**)
- **Mathematics:** Stochastic Calculus, PDEs, Probability Theory, Statistics, Optimization, Signal Processing
- **Computer Science & AI:** Deep Learning, Reinforcement Learning, Computer Vision, NLP, LLM
- Research initiation focused on statistical learning and modeling. See Academic projects.

Preparatory Class PT*, Lycée de Cachan — majors: Math, Physics, Engineering — *2020 – 2022*

Lycée St-Thomas de Villeneuve — Scientific French Baccalaureate, **Highest Honors** — *2018 – 2020*

Professional Experience

Thales, Vélizy, France — *2022 – 2025*
AI Research & Vision Team – Autonomous Train Project, **3-year R&D** apprenticeship

- Designed **Computer Vision** models for real-time obstacle detection and scene understanding in railway systems.
- Built a **Retrieval-Augmented Generation (RAG)** pipeline with **LLM integration** for intelligent document search and reasoning.
- Developed **Generative AI (GenAI)** frameworks using **Latent Diffusion Models (LDM)** and **ControlNet** to synthesize rare visual scenarios enhance training datasets.
- Collaborated with ML researchers and embedded engineers to deploy production-grade AI modules.

Academic Projects

Latent Distance for Time Series — *2024 – 2025*

- Learning a structured latent space via a convolutional autoencoder, whose geometry is coherent with the notion of distance between temporal series.
- Application to anomaly detection on synthetic signals and ECG data — **paper in progress**.

Multi-Asset Trading via Deep Reinforcement Learning — *2024 – 2025*

- Designed intelligent trading strategies in commodity markets using deep reinforcement learning agents, accounting for portfolio dynamics.
- Rigorous backtesting using financial metrics: annualized returns, volatility, Sharpe ratio.

U-Net Segmentation with Mathematical Morphology Modeling — *2024 – 2025*

- Conducted research on precise segmentation of thin retinal vessels from biomedical images.
- Mathematical morphology modeling techniques to enhance segmentation accuracy and structural continuity.

Technical Skills

- **Programming Languages:** Python (PyTorch, TensorFlow, Pandas), SQL, Bash, LaTeX
- **Tools & DevOps:** Docker, Git, Bitbucket, Jenkins
- **Web Development:** HTML/CSS, JavaScript, React, REST APIs

Leadership & Volunteering

President, Student Union, CentraleSupélec – Managed a team of 20 members. — *2022 – 2023*

Humanitarian Project in Cambodia – NGO "Les Enfants de Klang Leu" — *2019 – 2022*

Languages

French: Native **English:** C1+ (Cambridge) **Serbian:** B1+ **Spanish:** B1