

Marwan Mashra

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Objective: Looking for a position as a Machine Learning Engineer/Data Scientist from September 2023

Professional Experience

Mars - Sep. 2023

Deep Learning Engineer, Intern Stellantis

Paris, France

- **Reduced by 74%** training time, while **increasing by 11%** the performance of state-of-the-art model DenseTNT.
- **Improving** an internally developed model PreTR, by adding multimodality, and allowing for a scene-aware backbone.
- **Adapted state-of-the-art** vehicles trajectory prediction models, Vecternet, DenseTNT, for pedestrian's trajectory prediction.
- Extracted map information of the Dataset ETH/UCY from raw images and converted it to a vector representation.

Feb. - Mars 2023

Computer Vision Engineer, Freelance Flaggr

Paris, France

- **Reduced by 60%** inference time of the main vehicle detection algorithm, while **losing less than 4%** accuracy.
- **Automated the evaluation** of new models by creating a Benchmark pipeline.
- Implemented their first version of a night vehicle detection algorithm.

May - Aug. 2022

Research Intern CNRS

Paris, France

- **Designed a pipeline** allowing real-time AI content generation for Augmented Reality, by integrating state-of-the-art text-to-image diffusion models and AR motion tracking techniques.
- Investigated and **implemented state-of-the-art methods** for diffusion-based image generation, upscaling, and segmentation.

Nov. – Feb. 2022

Research Student University of Paris-Saclay

Paris, France

- **Launched**, under the supervision of **Isabelle Guyon**, the ML competition TRUSTAI on CodaLab.
- **Prepared the Dataset** used in the competition, building the preprocessing pipeline, and rigorously following strict guidelines.
- Explored and **reviewed more than 10 datasets**, diagnosing potential sources of discriminatory biases.
- Determined a bias evaluation metric, after inspecting the scientific literature on fairness in machine learning.

June - Aug. 2021

Software Engineer Intern LIRMM – Research Lab

Montpellier, France

- **Led a team of 5** members as a Scrum master, following Agile software development practices and methodologies.
- Designed and built a **cross-platform Vocal Assistant**, using a microservices architecture with Python, Docker, and Flask.
- **Delivered in less than 3 months** a Raspberry Pi prototype, along with a design and technical documentation.

Awards & Extra Activities

1st Prize Hackathon

Organized by **HEC & Institute Polytechnique & Irina** | Awarded by **TotalEnergies** (see [certificate](#))

Awarded among 16 teams for having the best performing AI model. The Hackathon focused on Computer Vision for sustainability.

Excellence Scholarship by Campus France

Selected among 500 students in my city for a 6-year merit scholarship, as part of an exchange program between Yemen and France.

University Tutor

University of Paris-Saclay

Nominated by the Head of Master to tutor first year AI master students.

Student Delegate

University of Montpellier

Elected for 2 years consecutive by the Head of the Computer Science Department to represent more than 100 students.

Skills & Languages

Soft Skills

Leadership, Proactivity, Autonomy, Thirst for learning, Good programming & problem-solving skills, Good communication skills

Technical skills

Areas of experience: Computer Vision, Transformers/Attention, Motion Forecasting, Image processing, Graph Neural Networks

Machine learning: PyTorch, TensorFlow, OpenCV, Scikit-Learn

Programming: Python, SQL/MySQL, C/C++, JavaScript

Tools : Docker, Slurm, Apache Spark, Fast API, , Flask, MongoDB, Git

Languages

English (Fluent)

French (Fluent)

Education

Sep. 2021 – Sep. 2023

University of Paris Saclay

Paris, France

MSc in Artificial intelligence | GPA: 4.0

Main Courses: ML Algorithms, Deep Learning, Computer Vision, Large-Scale Distributed Data Processing, Generative Models, applied statistics, Advanced Optimization, Signal Processing, NLP, Information Retrieval, Reinforcement Learning.

Sep. 2018 – Aug. 2021

University of Montpellier

Montpellier, France

BSc in Computer Science | GPA: 4.0

Main Courses: Algorithms & Data Structures, Project Management, System design, Object-oriented programming.