

# Marwan Mashra

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Objective: Looking for a 6-month internship position as a Machine Learning Engineer/Data Scientist from March 2023

## Education

Sep.2021 - Present

**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.

## Professional Experience

May - Aug. 2022

**Research Intern** CNRS – LISN

**Paris, France**

- Designed an approach 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.
- Submitted a Poster to the IEEE VR 2023 Conference on Diffusion-Based Content Generation for Augmented Reality.

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.

June - July. 2020

**Web Developer Intern** LIRMM – Research Lab

**Montpellier, France**

- Implemented a digital version of Labo DataViz, by coordinating a team of 3 to develop an interactive Web Platform.
- Collaborated with a team from the University of Quebec at Chicoutimi to establish the project specification.

June 2019

**App Developer Intern** Perform VR

**Montpellier, France**

- Optimized and tested a virtual reality android mobile application with Java.

## Awards & Extra Activities

**1<sup>st</sup> Prize Hackathon**

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

Awarded among 16 teams for having the best preforming 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.

## Academic & Personal Projects

**Hyponym-Hypernym Extraction** [ see on [GitHub](#) | read article on [TowardsDataScience](#) by a teammate]

Trained a Named-entity recognition (NER) model and extracted hyponym relations in tech patents | Spacy, NLTK, Prodigy

**Probabilistic Generative Models** [see on [GitHub](#)]

Implemented in PyTorch several probabilistic generative models (VAE, RBM, Real-NVP) | PyTorch, NumPy, Matplotlib

**Twitter Streaming Data** [see on [GitHub](#)]

Processed, clustered, indexed, and queried tweets from a simulated data stream | Spark, Elasticsearch, TwitterAPI, Socket

**Aerial Competition**

[see on [GitHub](#)]

Achieved 91.4% accuracy on a multi-class geographic image classification competition | TensorFlow, OpenCV, Scikit-Learn

## Skills & Languages

**Soft Skills**

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

**Technical skills**

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

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

Tools :

Docker, Kubernetes, Apache Spark, Flask, MongoDB

**Languages**

**English** (Fluent)

**French** (Fluent)