Marwan Mashra

**Mobile:** +33 767811449 **E-mail :** marwan.mashra@gmail.com

**Website :** [**www.mashra.fr**](https://www.mashra.fr/) **GitHub :** [github.com/MarwanMashra](https://github.com/MarwanMashra) **LinkedIn :** [linkedin.com/in/marwanmashra](https://www.linkedin.com/in/marwanmashra/)

**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 Leaning, 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 leaning.

## 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

## 1st Prize Hackathon Organized by HEC & Institute Polytechnique & Irina | Awarded by TotalEnergies (see [certificate](https://www.mashra.fr/documents/Hackathon_certificate.pdf))

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](https://github.com/MarwanMashra/hyponymy_extraction) | read article on [TowardsDataScience](https://towardsdatascience.com/implementing-hearst-patterns-with-spacy-216e585f61f8) 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](https://github.com/MarwanMashra/Generative-Models)]

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

**Twitter Streaming Data** [see on [GitHub](https://github.com/MarwanMashra/Twitter-Streaming-Data)]

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

**Aerial Competition** [see on [GitHub](https://github.com/MarwanMashra/Aerial_Challenge)]

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)