

Mohamed Ali SRIR

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LOOKING FOR A 6 MONTH END-OF-STUDY INTERNSHIP

I am passionate about artificial intelligence, various data structures and open-source projects, and I am actively seeking a **6-month internship** starting in **April 2025**, potentially leading to a PhD.

PROFESSIONAL EXPERIENCE

Interdigital

Research Intern

Rennes, France

March 2024 – August 2024

Led cutting-edge research on 3D rendering technologies, focusing on Neural Radiance Fields (NeRF) and 3D Gaussian Splatting for advanced face avatar creation and animation within the open-source Nerfstudio framework.

- Conducted comprehensive comparative analysis of NeRF and Gaussian Splatting methods for static scene reconstruction, with emphasis on general scenes and facial modeling using sparse datasets.
- Spearheaded the implementation of multiple state-of-the-art papers on conditioning Gaussian Splatting with template models, culminating in the development of an innovative hybrid model.
- Enhanced Nerfstudio's functionality by extending its existing GUI and implementing debugging tools, improving the framework's user experience and development capabilities for the specific task of face avatar reconstruction and animation.
- Contributed to the filing of three patents for the MPEG avatar standard, showcasing the innovative nature and industry impact of the research.

Tools: Python, PyTorch3D, Nerfstudio, Open3D, Blender, Git, TensorBoard

INRIA

Research Intern, Working in a co-project between Simbiotx (Saclay, FR) and Heartflow (Mountain View, CA)

Saclay, France

July 2023 – March 2024

Engaged in a fulfilling internship focused on refining numerical methods for vessel tree extension and perfusion simulation within the intricate domain of biophysics research.

- Developed Graph Neural Network (GNN) models for predicting outcomes on 3D meshes.
- Tackled optimization challenges with a mix of analytical and symbolic approaches to generate physics-compliant binary trees.
- Contributed to the creation of visualization tools, aiding in testing alternatives and gaining insights into problem-solving.
- Assisted in developing tools and APIs to seamlessly integrate existing research into the commercial pipeline.
- Implemented Multi-GPU Training in Pure PyTorch

Tools : Python, pytorch, numpy, sympy, Docker, AWS, bash, C, git, tensorboard, paraview, pandas

Publication : Convex Optimization for Binary Tree-Based Transport Networks - (accepted DGMM 2024) - Second Author

ACADEMICS

Master in Artificial Intelligence, Systems, and Data

PSL University Joint Program (Paris-Dauphine, École Normale Supérieure, Mines ParisTech)

Paris, France

Sept 2024 – Dec 2025

- M2-level curriculum providing solid theoretical knowledge and practical experience of state-of-the-art methods in artificial intelligence and data science.
- Practical formation and environment leading to academic and private research
- Courses : Foundations of machine learning, Optimization for machine learning, Large language models, Reinforcement learning, Deep learning for image analysis, Data acquisition, extraction, and storage

Télécom Paris

Top Tech French School - Grandes écoles

Palaiseau, France

Sept 2021 – Dec 2025

- Image Processing : Track developing mathematical image techniques, computer vision and 3D reconstruction.
- Signal Processing and Artificial Intelligence : This program develops a broad and operational vision of statistical learning and signal processing.

Preparatory Classes Moulay Youssef

2 intensive years of mathematics, physics and computer science to prepare for entry into the best French schools

Rabat, Morocco

Sept 2019 – June 2021

PROJECTS

Inpainting Project

Python, imageIO, numpy, tkinter

[Source Code](#)

- Implementation of a patch inpainting method inspired by a research paper
- Creation of a GUI to test the method

Equalizer from Scratch

Python, scipy

[Source Code](#)

- Implementation of an equalizer from scratch with STFT

Learning-Reinforcement-Learning

Python, numpy, pytorch

[Source Code](#)

- Understanding the basics of Reinforcement Learning with a simple example (Cartpole)
- Testing different approaches and understanding the constraints of convergence

SOCIAL

AMGE-Caravane's President

Sept 2022 – Sept 2023

Paris, France

- Training and orientation of students of public preparatory classes in Morocco via simulated tests on Discord
- Organization of conferences and events around the academic and professional world with Moroccan Diaspora in Paris
- Organization of cultural events

LANGUAGES

- Arabic (Native speaker)
- French (Native speaker) - DALF C1
- English (C1) - 107/120 TOEFL
- German(A2)

REFERENCES

Irène Vignon-Clementel, PhD

Research Director of SimbiotX Team at INRIA

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HOBBIES

- Digital Art
- Running
- Cinema and Animation