# Ahmed HASSAYOUNE

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### **EDUCATION**

SORBONNE UNIVERSITY Paris, France

Master's Degree (M2), Image Track (IMA)

2024 - 2025

- Double degree program with the IMAGE major at EPITA.
- Medical Imaging, Computer Vision, Deep Learning, Advanced Image Processing.

### EPITA – SCHOOL OF COMPUTER ENGINEERING

Paris, France

Engineering Degree, Major in IMAGE

2020 - 2025

- Machine Learning, Pattern Recognition, Medical Imaging, GPU Optimization.
- Valedictorian during the first two years of the preparatory cycle.

# HANYANG UNIVERSITY (Top 20 in Asia)

Seoul, South Korea

Exchange Semester, GPA 87/100

(6 months) 2022

• Linear Algebra, Machine Learning, Data Structures, Object-Oriented Programming.

### ISC - INTERNATIONAL SCHOOL OF CARTHAGE

Tunis, Tunisia

Scientific Baccalaureate, specialization in Mathematics, Highest Honors

2020

#### PROFESSIONAL EXPERIENCE

### GENERAL ELECTRIC HEALTHCARE

**Buc, France** 

### Final-Year R&D Internship

(6 months) Mar. 2025 – Sept. 2025

- Developed a 3D generative model for pulmonary nodule synthesis in CT imaging.
- Designed conditioning methods to control generation along morphological and pathological aspects.
- Created synthetic CT scans and enhanced detection model performance.
- Annotated over 1,300 lung nodules (3D segmentation and labeling) to enrich training datasets.

# DXOMARK Paris, France

### Full-Stack Web Development Internship

(5 months) Sept. 2023 – Feb. 2024

- Developed a visualization interface for smartphone camera scoring.
- Migrated the existing application from Vue 2 to Vue 3 (20+ dependencies).
- Designed and implemented the backend, integrated into existing architecture.
- Collaborated in a Scrum team with engineers and professional photographers.

# **PROJECTS**

# FOCH HOSPITAL & UNIVERSITY PARIS-SACLAY

Paris, France

# Alignment of mass spectrometry data

(6 months) Sept. 2024 - Feb. 2025

- Team project of 5 students for analyzing and aligning exhaled air GCxGC-MS data.
- Conducted literature review and benchmark of 5+ alignment methods.
- Implemented signal and image processing techniques (pattern recognition, edge detection, Fourier transform).
- Integrated algorithms into the codebase with reliable aligning results on real chromatograms.

# 3D Brain Tumor Analysis

(3 weeks) 2024

- Analysis of changes in tumor images through registration, segmentation, and visualization.
- Integration of multiple algorithms with benchmarking to select the best approaches.
- Utilized ITK and VTK libraries for processing and visualizing imaging data in Python.

# **SIFT Implementation**

(2 weeks) 2024

- Implemented the SIFT algorithm in C++ for feature detection and matching.
- Optimized performance for fast and accurate feature extraction and matching.

# **SKILLS**

Technologies: C, C++, Python (Numpy, Scipy, Pandas, Sklearn, OpenCV, PyTorch, TensorFlow, Keras),

Docker, CUDA, Blender, VTK/ITK, Git.

Languages: French and Arabic (Bilingual), English (TOEIC 925)