

Hamza El Massaoudy

Software Engineering | Machine Learning | Test Automation

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SUMMARY

M.Eng. student focused on AI, with experience in Python test automation, ML validation and full-stack development. Built reproducible pipelines with CI and release checks, investigated failures under distribution shift, and developed business software sold more than 100 times.

SKILLS

Testing and quality: pytest, GitHub Actions CI, pre-commit, robustness and stress testing, failure analysis.

Python and ML: Python, PyTorch, MONAI, GPU training, scikit-learn, NumPy, pandas.

Software: Django, Spring Boot, Flask, Java, JavaScript, PHP, SQL (MySQL, PostgreSQL).

Tools: Git, Linux, Python packaging, Docker (coursework only).

PROJECTS AND RESEARCH

Liver CT pipeline and external validation [Public code]

2025 - 2026

- Built and released a reproducible Python ML pipeline (v2.4.2) with pytest, GitHub Actions CI, smoke tests and release validation.
- Audited 1,112 scans and isolated acquisition artifacts confounded with class. Verified the CNN's reliance on these artifacts through counterfactual tests.
- Stress-tested the model on 203 external patients and analyzed acquisition shift as a source of failure.

Multimodal Classification of Primary Liver Tumors on Multiphase CT: Internal Performance, Acquisition Artifacts, and Limited External Transportability. *Journal of Intelligent Medicine and Healthcare*. **Under revision**.

Explainable HCC survival prediction [Public code]

2026

- Built a Python package and command-line interface with a local Streamlit demo, pytest tests on synthetic data, pre-commit and ruff.
- Implemented leakage-safe nested cross-validation with training-only calibration and threshold selection. Documented methods and limitations in model and data cards.

EXPERIENCE

gethsk | Co-founder

Jan 2026 - present

- Co-founded an HSK learning app in development. Design learning paths and courses and implement the supporting code.

AsiaScholar | Full-Stack Developer and Technical Coordinator (Intern)

Nov 2024 - Jun 2025

- Led development and maintenance of the agency website and built an internal operations system, coordinating technical delivery across teams.

Self-employed | Freelance Web Developer

2023 - 2025

- Built a PHP/MySQL Product Management System for invoicing, orders, payments and analytics, sold more than 100 times in Morocco, Saudi Arabia and the UAE.
- Delivered an e-commerce system with online checkout and a Java/Spring Boot/SQL student management system for École Al Faraj, Taza.

EDUCATION

M.Eng. in Computer Science and Technology | NUIST

2025 - 2027

Nanjing University of Information Science & Technology. Expected June 2027. GPA: 3.69/4.0.

Thesis: Trustworthy AF detection with ECG foundation models, selective prediction and noise stress testing.

B.Eng. in Computer Science and Technology | Dalian Polytechnic University

2021 - 2025

Dalian, China. Taught in English.

AWARDS

Longshan Scholarship, First Class, NUIST (2026 - 2027).

LANGUAGES

Arabic and Amazigh (Native), English (C1), Chinese (HSK 4), French (B1-B2).