

Yannis FERHAOU

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SKILLS

Programming languages: C/C++, Python, Java
Libraries: OpenMP, OpenCV, OpenGL, SDL2, QT, Pytorch, Tensorflow, Keras
Developer Tools: Git, Docker, VS Code, QT Creator, PyCharm, IntelliJ
Languages spoken: French (native), English (professional), Spanish (basic)

EDUCATION

University Claude Bernard Lyon 1 Villeurbanne, France
Master's in Computer Science, Image, Development, and 3D Technologies September 2023 – September 2025

University Claude Bernard Lyon 1 Villeurbanne, France
Bachelor's in Computer Science September 2020 – July 2023

EXPERIENCE

AI research internship February 2025 – July 2025
Institut Pascal - University Clermont Auvergne Le Puy-en-Velay, France
Topic: Language model integration in 3D Slicer.

- Explored and implemented the integration of LLMs into 3D Slicer.
- Trained deep learning models on multi-GPU setups.
- Developed a 3D Slicer extension embedding the trained model.
- Work considered for publication in the Journal of Open Source Software.

PHP/Symfony Developer May 2023 – June 2023
AMS Association Mantes Solidarité Mantes-La-Ville, France

- Integration of a payment form.
- Implementation of a donation management interface for administrators.

PROJECTS

Mesh Viewer | C++, Qt September 2025

- Developed a 3D visualization tool supporting multiple mesh formats (.off, .obj, .txt).
- Implemented export functionalities to save meshes in the same formats.

SlicerGPT | Python, Transformers, Qt March 2025 – September 2025

- 3D Slicer extension that integrates a local AI chatbot.
- Provide context-aware help using your scene and official documentation.

Mesh and computational geometry | C++ October 2024 – December 2024

- Laplacian operator and curvature calculation of a mesh.
- Elementary operations on triangular meshes (triangle split, edge flip).
- Implementing Lawsons' algorithm to obtain a "Delaunay" mesh.

Geometric Modeling | C++, Qt October 2024

- Implemented 3D surfaces of revolution using Bézier and Hermite cubic spline curves.
- Developed geometric primitives, transformations, and operations to model complex shapes.

Medical Imaging Research | Python, Tensorflow, Keras January 2024 – June 2024

- Automatic segmentation of the diaphragm.
- Deep learning with Transfer Learning techniques.
- 3D volume reconstruction of organs.

LEGO Robots Retrieving Balls | C++, EV3Dev, OpenCV, Git February 2024 – June 2024

- Programmed in C++ using the EV3Dev library.
- Used OpenCV for image processing.
- Combined 4 cameras to create an overhead view.