Yanisse FERHAOUI

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Skills

Programming languages: C/C++, Python, Java
Libraries: OpenMP, OpenCV, OpenGL, SDL2, Qt, Pytorch, Tensorflow, Keras
Version management and CI/CD: Git, GitLab CI, Github Actions, Jenkins
Developer Tools: VS Code, Qt Creator, JetBrains IDEs, Docker, CMake, GoogleTest
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.
- Development of a 3D Slicer extension who integrates the trained LLM.

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

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

Projects

Mesh Viewer | *C++, Qt* — September 2025 – Present

- Developed a 3D visualization tool supporting multiple mesh formats (.off, .obj, .txt).
- Implemented export functionalities to save meshes in the same formats.
- Support for adding textures when the object allows it.
- Continuous deployment with Gitlab CI.

SlicerGPT | *Python, Transformers, Qt* — March 2025 – Present

- 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.