

Yannis FERHAOUI

Software Engineer

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TECHNICAL SKILLS

Core & 3D Languages: C++, C, Python, GLSL, Qt/QML, Java
Web & Fullstack: JavaScript, React.js, PHP/Symfony, HTML/CSS
Specialized Libraries: OpenGL, OpenCV, SDL2, VTK/ITK, PyTorch, TensorFlow
Engineering & DevOps: Git, GitLab CI/CD, Docker, CMake, Linux, GoogleTest
Languages: French (native), English (professional)

EDUCATION

Claude Bernard University Lyon 1 Villeurbanne, France
Master's in Computer Science, Image, Development and 3D Technologies 2023 – 2025
M2: GPU programming, Virtual Reality, Image processing, Computational geometry.
M1 core curriculum: Software engineering & project management, Artificial Intelligence, Computational complexity.

Claude Bernard University Lyon 1 Villeurbanne, France
Bachelor's in Computer Science 2020 – 2023
Comprehensive CS foundation: Operating systems, IP/TCP networks, SQL databases, Computer architecture, Web development, Advanced algorithms.

PROFESSIONAL EXPERIENCE

Institut Pascal - Clermont Auvergne University Le Puy-en-Velay, France
R&D Intern: Artificial Intelligence & Software Integration Feb. 2025 – Jul. 2025

- Architectural integration of LLMs into the 3D medical software 3D Slicer.
- Training and fine-tuning of deep learning models on a multi-GPU compute cluster.
- Development of an extension for user assistance.
- Writing technical documentation and following open-source coding standards.

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

- Backend development: donation management API and administration interface.
- Integration of a payment module and management of a relational database.

SELECTED PROJECTS

Mesh Viewer | C++, Qt, OpenGL, CMake 2025

- Design of a high-performance mesh viewer supporting standard formats (.obj, .off).
- Implementation of the graphics pipeline and texture management.
- Setup of a GitLab CI/CD pipeline for automated builds and tests.

SlicerGPT | Python, Transformers, Qt 2025

- 3D Slicer extension integrating a local chatbot.
- Provides context-aware assistance using the scene and the official documentation.

Computational Geometry | C++, Data Structures 2024

- Implementation of Lawson's algorithm and mesh manipulation.
- Optimization of data structures for fast processing of point clouds.

Embedded Robotics & Vision | C++, Linux (EV3Dev), OpenCV 2024

- C++ development on an embedded system for an autonomous robot.
- Real-time image processing for object detection and multi-camera data fusion.
- Management of inter-process communication and motor control.