



Nathan CERISARA

Computer Science and Networking Engineering student, specializing in data science and AI.

Seeking a fixed-term or permanent contract in Strasbourg from October–November 2026 after obtaining my double engineering + master's degree.

• ABOUT & CONTACT

• Email

cerisara.nathan@protonmail.com

• Téléphone

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• GitHub

<https://github.com/nath54>

• LinkedIn

<https://www.linkedin.com/in/nathan-cerisara-8669331ba/>

• Personal Website

<https://nath54.github.io>

• PERSONAL INTERESTS

- Science & Computing
- Artificial Intelligence / Deep Learning / LLM
- Modeling & Simulations
- 3D & Computer Graphics
- Software / Game / Web Development
- Sports (8 years of basketball, regular cycling)
- Go & other board games
- Music (learning guitar)

• EDUCATION

• 3rd year at Télécom Physique Strasbourg - Computer Science & Networking + Double degree Master's

Télécom Physique Strasbourg. (2023-2026)

Advanced Computing, Data Science and Knowledge, Image-Vision and Decision, Digital Data and Cybersecurity, Complex Data and Natural Language

• Pre-engineering Preparatory Classes (MP2I/MPI)

Lycée Louis-le-Grand. (2021-2023)

(Mathematics-Physics-Computer Science prep school).

• Baccalaureate in Mathematics, Computer Science & Physics, with high honors.

High School. (2021)

• SKILLS

Computer Science : Advanced Algorithms, Data Structures, Neural Networks / AI, Hardware Architectures, Operating Systems, Compilation & Software Development, ...

Programming Languages : Python, C/C++, C#, Java, Javascript, Assembly (x86, MIPS, RISC-V, ...), ...

Markup Languages : HTML, CSS, XML, JSON, YAML, Latex, SVG, ...

Systems : Bash, Git, SQL & NoSQL, Linux, Windows, Docker, ...

Data Science & AI : numpy / pandas, matplotlib / seaborn / plotly / streamlit, pytorch / tensorflow / keras, hugging-face / kaggle, All ML / Neural Network models, LLMs (finetuning / QLoRA, RAG, function-calling, ...), MLOps (docker, mlflow, minio/s3, ...), ...

Languages : French (native), English (C1), Spanish (A1), ...

• PROFESSIONAL PROJECTS

• Research Internship in Brussels Informatics Laboratory / ULB Solbosch (IRIDIA) (May - August 2026)

Research on LLM-based code generation to control a swarm of robots using human movements.

• Research Internship in Nancy Informatics Laboratory (LORIA) (June-July 2025)

Research on Ladder Side Networks for fine-tuning Large Language Models.

• R&D Internship in Alcatel-Lucent Enterprise (June - August 2024)

Implementation of semantic search, named entity recognition, and conversation clustering.

• ACADEMIC PROJECTS

• Export and Optimization of Neural Networks for Microcontrollers

(January 2025 / January 2026, group project, Python/PyTorch/ONNX/C, STM32 Cube IDE / STM32 edge ai developer cloud, STM32 MCU)

• Reinforcement Learning Environment: Training a Robot to Navigate Obstacles

(December 2025 / February 2026, individual project, Python/PyTorch/Mujoco/Gymnasium/PPO)

• Multimodal Data Classification of Rakuten France Products

(December 2025 / January 2026, group project, Python/PyTorch)

• Enumeration of Circular Codes of Self-Complementary Tetranucleotides

(November / December 2025, group project, developed in C++/Qt5)

• RISC-V Assembler Compiler for a Domain-Specific Language

(November / December 2024, group project, C/Lex/Yacc/Python/RISC-V assembly)

• PERSONAL PROJECTS

• Cross-Platform NAppEngine Compiler

(April - May 2026, Multi-target transpiler parsing custom DSLs (NaCode, NaXML, NaStyle, NaHAC) via Lark into unified IR ASTs to generate native PySide6 and WebJS SPAs, Python/Lark/WebJS/Qt6)

• Music Generation Engine via Scripted Instrument Synthesis

(November 2025, Recursive component modularization and scripted pipeline for music generation and Machine Learning of Synthesized Instruments, Python/Numpy/PyTorch)

• Chunked Diffusion LLM Architecture

(August 2025, Token Chunks for long context, Controlled generation with control mask, PyTorch)

• Token Context Compression through Word Embedding for Transformer LLM

(June 2025, Reduction of parameter count for token embedding, PyTorch)

• ArXiv Article Exploration and Annotation Application

(June 2025, Article linking via Python / WebApp + PDF extraction and ArXiv API)

• Interactive Text Fiction Engine

(June 2025 - August 2025, Abstraction and modeling with Python)

• Python Application Engine with Multiple Graphics Interface Support

(December 2024 - June 2025, Python/SDL2/OpenGL/GLFW/Vulkan/Pygame)

• Language Learning Application

(July - August 2024, Course generation with LLM + Godot Engine)

• Symbolic Computation Engine Prototype

(June 2023, Mathematical abstraction and modeling with Python)

• And many other projects on my GitHub.