

# Louis Peyrondet

## ENGINEERING STUDENT IN COMPUTER SCIENCE

Bordeaux, France | louis.peyrondet@hotmail.fr | My Portfolio | github.com/PoroCoco

linkedin.com/in/louis-peyrondet

### Education

- ENSEIRB-MATMECA, Bordeaux Graduate School of Engineering, France,** 2022 – 2025  
Engineering Degree in Computer Science, Specialization in HPC
- **Coursework:** Computer Architecture, Parallel Algorithms, System Programming (C), OOP (C++ , Java)
- Keio University, Tokyo, Japan,** Computer Science, Semester abroad Spring 2024
- **Coursework:** Advanced Visualization, Computer Vision, Virtual Machines, Databases
- University of Bordeaux, France,** Computer Science 2020 – 2022
- **Ranked first** among all students in the Computer Science department
  - **Coursework:** Data Structures and Algorithms, Networking, Probabilities, Functional Programming (OCaml)

### Experience

- Research Intern, INRIA (French Institute for Research in Computer Science)** June 2023 – Aug 2023
- Designed and implemented in C a decentralized version of an I/O scheduler for Parallel File Systems
  - Engineered a way to allow parallel service, removing a linear scaling in the I/O scheduling
  - Presented previous work at the French Conference in Parallelism, Architecture and System (Compas) Annecy July 2023
- Research Intern, INRIA (French Institute for Research in Computer Science)** June 2022 – Aug 2022
- Worked on studying and improving I/O performances of a finite element simulation HPC library
  - Improved I/O times by 90% using MPI-IO
  - Collaborated with the Brazilian National Laboratory of Scientific Computation (LNCC)
  - Published and presented a paper in an international conference : SBAC-PADW Bordeaux Nov. 2022

### Publications

- I/O performance of multiscale finite element simulations on HPC environments* Nov 2022  
Francieli Boito, **Louis Peyrondet**, Antonio Tadeu A. Gomes, Luan Teylo  
10.1109/SBAC-PADW56527.2022.00012

### Projects

- Voxel Game Engine** 2024
- Renders in real time at over 120 fps more than 4 Billion voxels by leveraging multi-threading and optimizations
  - Built from scratch using C and OpenGL
- Operating System for RISC-V Processors** 2024
- Independently taught OS concepts to three undergraduates through the team development of an operating system from the ground up in C
  - Features virtual memory, process management, system call and exceptions, basic I/O, user space programs

### Skills

Programming Languages:	Tools:	Languages:
C, Python, C++ , Lua, Java, JavaScript, Bash	Git, CMake, OpenMP, CUDA, pthread, MPI, OpenGL, Vulkan, Unity, OpenCV, Numpy, Matplotlib, $\LaTeX$ , Linux, VSCode	<ul style="list-style-type: none"><li>• French: Native</li><li>• English: C1 IELTS Certified</li><li>• Japanese: Elementary</li><li>• Spanish: Elementary</li></ul>