

Computer science student

Maxime Pinard

👤 23 years old
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Student in the final year of a computer science Engineer and Master's degree program

Education and qualifications

Université du Québec à Chicoutimi

Master in computer science

Currently in 3rd year, for a double degree with UTBM

Université de Technologie de Belfort-Montbéliard

Computer science engineer diploma, imaging specialty, (eq. Master of Science)

3rd year done at UQAC for a double degree

Université de Technologie de Belfort-Montbéliard

DEUTEC

Preparatory classes before the specialization

Lycée Louis Aragon (high school)

Baccalauréat with major in maths, with honours

Saguenay, Quebec, Canada

2018
2020

Belfort, France

2016
2020

Sèvenans, France

2014
2016

Héricourt, France

2011
2014

Languages

French: Native language

Spanish: Moderate level

English: B2 (BULATS 68), Professional working level

Japanese: Basic level

Computer skills

Languages: C++, C, Java, \LaTeX /TikZ, Python, Bash, CUDA, SQL, HTML/CSS, Assembly, VBA...

Methods/Tools: Agile, Unit tests, Design patterns, UML, BPMN, git, CMake, Make, Maven, Regex

Metaheuristics: Tabu search, simulated annealing, genetic algorithms, ant colony optimization algorithms, PSO

Libraries: boost, fmt, spdlog, OpenGL, OpenCV, OpenMP, MPI, GTest, Catch2, Capstone, Keystone, Json, SFML, ImGui, GLFW, GLM, libmpg123, TagLib, JavaFx, JUnit4

System administration: GNU/Linux (Debian 8+), personal server for Java EE and Docker web services hosting

IDE: Visual Studio, JetBrains IntelliJ IDEA and CLion, Eclipse

Publications

- [1] J. Boulmier, F. Holweck, M. Pinard, and M. Saniga, "Veldkamp spaces of low-dimensional ternary segre varieties," *Results in Mathematics*, vol. 74, no. 1, p. 54, Feb. 2019, ISSN: 1420-9012. DOI: [10.1007/s00025-019-0974-2](https://doi.org/10.1007/s00025-019-0974-2).

Others qualifications

- French driving license
- PSC1, French first aid certification

Work experiences

Institut de Recherche en Informatique, Mathématiques, Automatique et Signal, 6 months

Mulhouse, France

Stagiaire

09/2019 - 02/2020

- Development of memetic hybrid metaheuristics for the Set Cover Problem and C++ high performance implementation

Ambulances Phoenix, 4 months

Héricourt, France

Ambulance technician, Patient care and transportation

07-08/2018, 07-08/2019

Direction Générale de l'Armement Maîtrise de l'Information, 6 months

Bruz, France

Intern

08/2017 - 01/2018

- Work on GenDbg, a multi languages / OS / architecture debugger:
Development in C of a disassembly module for MIPS architectures and the associated unit tests
- Work on YaCo, an IDA Pro plugin enabling collaborative reverse-engineering using Git:
Ported to C++ and improved Git repository management and IDA events handling

JAB France, 1 week

Evolène, Switzerland

Activities supervisor, Camp of 40 young people, team of 15 supervisor

02/2016

JAB France, 1 week

Contamines, France

Activities supervisor, Camp of 50 young people, team of 20 supervisor

02/2015

Souchier SAS, 4 weeks

Héricourt, France

Intern, Installation of gaskets and assembly of smoke evacuation systems

01/2015

Projects

Personal

- Header-only dynamic bitset implementation and unit tests [C++, Catch2]
- Music player [C++, ImGui, SFML, spdlog, libmpg123]
- Utility functions to configure C/C++ projects (clang-format, ccache, sanitizers,...) [CMake]
- Number base converter, example ImGui/SFML [C++, ImGui, SFML]
- Console graphical library for Windows and Unix based systems [C]
- Dungeon crawler with procedural levels generation [Java, JavaFx]
- L^AT_EX/TikZ implementation of the UTBM internship report covers
- L^AT_EX/TikZ Beamer implementation of the UTBM presentation theme
- Multiplayer Snake like game (local network) [C++, SFML]

[dynamic_bitset](#)

[MagicPlayer](#)

[CMutils](#)

[BaseConverter](#)

[ConsoleControl](#)

[Raoul-the-Game](#)

[utbm-latex-internship-report-covers](#)

[utbm-beamer-theme](#)

[PapraGame](#)

Research

- Hyperplanes calculator in dimension 4 finite geometries, (performance oriented) [C++]
> [publication \[1\]](#)

[HyperplaneFinder](#)

Internship

- Hex-Rays IDA collaborative reverse-engineering plugin [C++, GTest, IDA]
- Assembly / disassembly module for MIPS processors assembly code [C, Capstone, Keystone, GTest]

[YaCo](#), [Internship report \(fr\)](#)

[Internship report \(fr\)](#)

School

- Construction and render of a 3D parametric object with OpenGL [C++, GLFW, ImGui]
- MiniMetro clone: subway management simulator [Java, JavaFx]
- Pogo game with MinMax/AlphaBeta AI [C++, ConsoleControl]
- Multi-users file storage server [C++, SFML]

[ParametricObjectsConstruction](#)

[MagicMetro](#)

[Pogo](#)

Interests

Computer science: New programming paradigms, procedural generation, operational research, software optimization, cryptography and the evolution of quantum computing.

Science: Mathematics, physical system simulation, quantum physics...

Sport: Skiing and winter sports, cycling (mountain biking in a club for 3 years), mountain hiking.