



MATHÉO JOSEPH

Master's student in Computer Science
at Polytechnique Montréal

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 MatheoJ

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SKILLS

Language: C++, C, C#, Java, Python, JS

Game Engine : Unity, Unreal Engine

Graphics API / Librairies : OpenGL, SDL, SFML

QT Framework

Docker, GIT

BLENDER

IDE : Vs code, Visual Studio, Clion, Eclipse

MY PROJECTS

3D platform video games with Unity C#

Game where you play as a ghost, who can possess enemies and control them, fight, unlock skills.

Physics engine for 2D video games C++ and SDL

Engine implementing basic forces (gravity, friction, Archimedes), rigid body physics, collision resolution.

Procedurally generated 3D environment, OpenGL, C++

Display of 3D models, texture animation using shaders, stencil testing, illumination and 1st and 3rd person camera management.

Development of Intelligent Agents for video games,

Unreal Engine, C++

Chasing, escape or autonomous movement behavior, with ray tracing or navmesh.

Compiler C, in C++ with the ANTLR library

Creation of an x86 compiler, implementation of all basic arithmetic operators, implementation of functions and tables

Localized historical anecdote sharing website, React

JS, Python

Computer Vision for object detection on game board,

Open CV, Python

SPORTS AND HOBBIES

- Badminton
- Rock climbing
- Robotic and algorithm
- Hiking
- 3D modeling
- Video games

LANGUAGES

- French : Native Speaker
- English: Professionnal
- Spanish: Intermediate

EDUCATION

Polytechnique Montréal

Master's degree in computer science - double degree, September 2023 - present

- Artificial Intelligence in Digital Entertainment Option


INSA Lyon, France

Computer engineering degree, 2019 - present

- Ranking 5th out of 130

PROFESSIONAL EXPERIENCES


SOFTWARE DEVELOPMENT INTERNSHIP C++ / QT

 **Savoir Faire Linux at Montréal, Québec**

May 2023 to August 2023 (4 months)

- Worked in the development team of the JAMI distributed communication application
- Creation of the JAMI home page personalization functionality
- Unit and functional testing in C++ and in QML

SOFTWARE DEVELOPMENT INTERNSHIP C++ /SFML

 **LIRIS computer research laboratory in Lyon, France**

June 2022 to September 2022 (4 months)

- Development of a C++ application allowing the creation of unbeatable AI for the "k in a row" game family
- Collaboration with research engineers and algorithmic researchers
- Realization of a substantial end-to-end project, optimized application and parallelization of calculations


DEVELOPMENT OF A SENTIMENT PREDICTION MODEL AND API

 **Open Source politics in Paris, France**

February 2022 to April 2022 (3 months part-time)

- Working with an engineer from the data science team
- Development of a machine learning model with Sklearn (Python)
- Development of an API with flask (Python)
- Dockerisation of the project and put into production

ORDER RECEPTION OPERATOR INTERNSHIP

 **Rexel at Roissy-en-Brie, France**

July 2020

- Working in a warehouse
- Unpacking and sorting received items for storage

ASSOCIATIVE EXPERIENCES

FRANCE CUP OF ROBOTICS 2022 WITH CLUBELEK

- Participation to the programming of the club robot
- Computing Vision with OpenCV, (Python)
- Actuator control (C++)

GENERAL SECRETARY OF INSA TECH4GOOD (2022 - 2023)

- IT project management
- Customer prospecting
- Administrative management of the association

ORGANIZED AN ACADEMIC SEMINAR FOR EUROPEAN STUDENTS WITH BEST LYON (2023)

PARTICIPATED IN THE HACKATHON OF QUEBEC LINUX MEETUP (SEPTEMBER 2023)