# Kérian Fiter

MASc Software Engineering student at Polytechnique Montréal | Double Degree with École Centrale de Nantes
Passionate about XR, Digital Twins, and AI — blending research and engineering through immersive technologies.

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## EDUCATION

### Research-Based Master's (MASc) — 2024 - Present
Polytechnique Montréal
- Double degree with École Centrale de Nantes in Software Engineering
- Research on Accelerating Digital Twin Reporting and Visualization
- Current GPA: 4.0/4.0

**Technologies**: Python, C++, Godot, Unity, Unreal Engine, Blender, CI/CD, RabbitMQ, Hugo, Meta XR, ARCore
**Supervisor**: Dr. Bentley OAKES

### French Engineering Degree (MSc) — 2022 - 2025
École Centrale de Nantes (Rank 4/170, L'Etudiant 2024)
- Generalist engineering education (Mathematics, Physics, Computer Science), specialization in 3D Graphics and XR
- Leadership roles: IT Manager of the Student Bureau, Tennis Club President, Entrepreneurship Club VP
- GPA: 3.7/4.0

**Technologies**: Python, C++, SQL, Unity, Unreal Engine, Blender, OpenGL (shaders GLSL), Meta XR, OpenXR
**Supervisor**: Prof. Jean-Marie NORMAND

### Classes Préparatoires aux Grandes Ecoles — 2020 - 2022
Lycée Chateaubriand — Rennes |
- Intensive program preparing for competitive entrance examination to top French engineering schools
- MPSI - MP curriculum (Mathematics, Physics, Computer Science)
- GPA: 4.0/4.0

## WORK EXPERIENCE

### Intern — 04/2024 - 08/2024
Naval Group Pacific — Adelaide |
- Multi-agent and drones in maritime environment for the LOTUS collaborative combat Digital Twin platform
- Worked within the International Research Lab (IRL) CROSSING
- My work will be showcased in an upcoming article

**Technologies**: ROS2, Gazebo, Python, C++, Unity, Blender
**Contact**: Prof. Cédric BUCHE

### Intern — 06/2023 - 07/2023
Orange Innovation — Lannion |
- Implemented a drift verification process for anechoic chamber measurements

**Technologies**: Python
**Contact**: Laurent COIFFARD

### Intern — 06/2019 - 06/2019
European Center for Virtual Reality (CERV) — Brest |
- Presentation of laboratory projects: RoboCup robots, CAVE VR room, student-researcher projects

### Intern — 06/2018 - 06/2018
Ericsson — Lannion |
- Developed a Unity module for a connected tennis analysis system in collaboration with CERV

### Intern — 12/2016 - 12/2016
Movement, Sport, Health (M2S) Laboratory — Rennes |
- Presentation of a motion capture system with infrared cameras, of a drone navigation algorithm, and introduction to Unity

## TECHNICAL SKILLS

- **Languages**: Python, C++, C#, JavaScript, Dart, SQL
- **3D/XR**: Unity, Godot, Unreal Engine, Blender, OpenGL (shaders GLSL), Meta XR, OpenXR, ARCore, DeepAR
- **Robotics**: ROS2, Gazebo, OpenCV, RabbitMQ
- **Development tools**: Linux, Git, Docker, CI/CD
- **Web/Applications**: HTML/CSS/JS, Flutter, Hugo, Wordpress, Heroku
- **Databases**: MySQL, Firebase, MongoDB
- **Mathematics**: Linear Algebra, Numerical Computing, Statistics, Optimization, Differential Equations
- **AI**: LMStudio (API), Game AI Agents, Neural Networks, Supervised and Unsupervised Learning, Pathfinding, Graph Traversal, Constraint Optimization
- **Others**: LaTex, Typst, Adobe Suite

## LANGUAGES

French (native) | English (bilingual) | Spanish (B1)

## CERTIFICATES

TOEIC 980/990 (C1/C2 Level English)

## ACHIEVEMENTS

XR Hackathon winner at CLARTE in the Laval Virtual Center *(2024)*

## RESEARCH

- Current: Writing a paper to be submitted to EDTconf 2025 (International Conference on Engineering Digital Twins)
- 2025-04-30: Attended SEAMS 2025 (International Conference on Software Engineering for Adaptive and Self-Managing Systems) organized as part of ICSE 2025 (International Conference on Software Engineering) in Ottawa

## PROJECTS

**Montreal Bus Fleet Digital Twin** *(2025)*
*Master's project*
- Developed a real-time visualization for a digital twin representing STM's bus fleet
- **Technologies**: Godot, Blender, Python, RabbitMQ
- **Project page**: kerianfiter.github.io/projects/montreal_bus_fleet_dt/

**Virtual Reality Narrative Game** *(2024)*
*Master's project*
- Developed an immersive narrative game with hybrid control (controller for movement + hand for interactions)
- **Technologies**: Unity, Meta XR, C#, Blender
- **Project page**: kerianfiter.github.io/projects/macro_enigma/

**Virtual Reality Escape Game** *(2023)*
*Engineering school project*
- Developed an escape game with hand tracking and immersive interactions
- **Technologies**: Unity, Meta XR, C#, Blender
- **Project page**: kerianfiter.github.io/projects/escape_game_vr/

**Augmented Reality Web App** *(2022)*
*Personal project - National Student-Entrepreneur Status (SNEE)*
- Developed a full-stack AR web application
- Conducted market research, worked on pricing strategies, and engaged with the Pépite Pays de la Loire group for support
- **Technologies**: HTML/CSS/JS, Heroku, Blender, DeepAR
- **Project page**: kerianfiter.github.io/projects/selfilt/

**Collaborative Music Sharing App** *(2019 - 2020)*
*Personal project*
- Developed a mobile app using Flutter for real-time music sharing among users
- **Technologies**: Flutter, Firebase, Dart
- **Project page**: kerianfiter.github.io/projects/jazz_discovery/

**Mobile Game on Play Store** *(2017 - 2019)*
*Personal project*
- Created and published a Unity-based mobile game, managing design, gameplay, and monetization
- **Technologies**: Unity, C#, Blender
- **Project page**: kerianfiter.github.io/projects/colored/

## INTERESTS

Tennis (competition level) | Piano (10+ years)

Reading (mostly science fiction, philosophy) | Photography

Design | Programming