

Kérian Fiter

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RESEARCH INTERESTS

Digital Twin Engineering (DTE), Large Language Models (LLMs), Ontologies (OML), Neuro-symbolic AI, Robotics & Simulation, 3D Visualization, Human-Computer Interaction (HCI), XR/Virtual Reality.

EDUCATION

Polytechnique Montréal 2024 – Present
PhD in Computer & Software Engineering Montreal, Canada

- Thesis: “Accelerating the Engineering of Trustworthy Digital Twins” (Supervised by Prof. Bentley Oakes).
- Admitted to accelerated PhD track via Integrated Master’s-Doctorate program.

Polytechnique Montréal 2024 – Expected Aug. 2026
Master of Applied Science in Computer & Software Engineering Montreal, Canada

- Completing Master’s degree requirements as part of integrated PhD path and international double degree.

École Centrale de Nantes 2022 – Expected Aug. 2026
Diplôme d’Ingénieur (Master of Science in Engineering equivalent) Nantes, France

- Highly selective French “Grande École” engineering program, with a second-year specialization in Software Engineering for Virtual and Augmented Reality.
- Admitted to double degree program with Polytechnique Montréal based on academic performance.

Lycée Chateaubriand 2020 – 2022
Post-Secondary Preparatory Program / CPGE (MPSI/MP) Rennes, France

- Completed 2 years of intensive undergraduate coursework in advanced mathematics, physics, and computer science, qualifying for top French engineering schools (“Grandes Écoles”).

ACADEMIC & INDUSTRY EXPERIENCE

Michelin (via Mitacs Accelerate) Feb. 2026 – Present
Software Research Engineer Intern Montreal, Canada

- Developing Digital Twin architectures for financial simulations.

Naval Group Pacific 2024 (5 months)
Software Engineer Intern (Supervised by Prof. Cédric Buche) Adelaide, Australia

- Engineered multi-agent drone simulations in maritime environments for the LOTUSim combat Digital Twin using ROS2, Gazebo, C++, and Python within the CNRS International Research Lab (IRL CROSSING).

Orange Innovation 2023 (1 month)
Software Engineer Intern Lannion, France

- Implemented automated drift verification for anechoic chamber measurements to improve 5G/6G antenna calibration.

AWARDS & HONORS

Mitacs Accelerate Grant 2026
– Awarded research funding for a Ph.D. industrial collaboration with Michelin.

XR Hackathon Winner | *Laval Virtual Center / CLARTE* 2024
– First place winner at the XR Hackathon.

PUBLICATIONS

- DTInsight: A Tool for Explicit, Interactive, and Continuous Digital Twin Reporting** 2025
- **Kérian Fiter**, Louis Malassigné-Onfroy, Bentley Oakes
 - Published and presented at EDTconf 2025 / MODELS-C 2025.
 - DOI: [10.1109/models-c68889.2025.00030](https://doi.org/10.1109/models-c68889.2025.00030)
- DTScribe: Generating Models for Digital Twin Reporting using Local Large Language Models** 2026
- **Kérian Fiter**, Angelica Portocarrero, Bentley Oakes
 - Under major revision at the International Journal on Software and Systems Modeling (SoSyM).
- A Probabilistic Approach for Software Update Coordination in Digital Twins** 2026
- Mikkel Schmidt Andersen, **Kérian Fiter**, Cláudio Gomes, Bentley Oakes, Michael Sandberg, Peter Gorm Larsen
 - Under major revision at the International Journal on Software and Systems Modeling (SoSyM).
- Involving before Evolving: A Vision for Trustworthy Enterprise Digital Twin Engineering** 2026
- **Kérian Fiter**, Adil Lagrou, Franck Dervault, Bentley Oakes
 - Submitted to EDTconf 2026 / MODELS-C 2026.
 - In collaboration with Michelin.

ACADEMIC SERVICE & PRESENTATIONS

- Student Volunteer** | *FSE Conference* Jul. 2026
- Student volunteer for the ACM International Conference on the Foundations of Software Engineering (FSE 2026).
- Student Volunteer** | *SEMLA Symposium* Jun. 2026
- Student volunteer for the Software Engineering for Machine Learning Applications Symposium (SEMLA 2026).
- Guest Lecturer & Speaker** | *Various Institutions* 2025 – 2026
- Presented DTInsight during the Digital Twin Engineering course at Polytechnique Montréal (Feb. 2026).
 - Presented a live demo of DTInsight at the Use Case and Digital Twin Factory Workshop in Lyon, France (Jan. 2026).
 - Presented at the SEMTL meeting at Université de Montréal (Sep. 2025).
- Student Volunteer** | *MODELS Conference* Oct. 2025
- Served as a student volunteer and presented a poster for DTInsight at the 28th International Conference on Model Driven Engineering Languages and Systems (MODELS 2025) in Michigan, USA.
- Tutorial Presenter** | *SEMLA Symposium* Jun. 2025
- Co-presented “What is a Digital Twin and How Do I Build One?” with Prof. Bentley Oakes at Polytechnique Montréal.

LANGUAGES

French (Native) | **English** (Bilingual/Fluent) | **Spanish** (Intermediate)