Nicholas **Nadeau**

CTO, Professional Engineer (P.Eng.), Doctor of Philosophy (Ph.D.)

Montréal, Canada

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Work

SmartOne   *Montréal, Canada*
Chief Technology Officer   *2024 - Present*
- Product innovation and R&D, focusing on ethical AI and human-AI collaboration for operational excellence.

Acrylic Robotics, BRIDGR, XMachina, XPR Labs
Advisor and Investor   *2020 - Present*
- Empowered startups with AI-driven operational enhancements and strategic growth mentoring.
- Facilitated access to high-growth AI startups and to advancing metaverse accessibility.

Nadeau Innovations   *Montréal, Canada*
Founder   *2022 - 2024*
- Strategic support for emerging technology startups and corporate innovation.

Airbotics, Citera, FemTherapeutics, Gratified, KonnectAI, NuBinary, OpAI Innovations, Osedea
Fractional CTO   *2022 - 2024*
- Spearheaded technology strategies and innovation across AI/ML and emerging technologies.

1X (Halodi Robotics)   *Montréal, Canada & Oslo, Norway*
Chief Technology Officer   *2021 - 2023*
- Spearheaded development of humanoid robots, securing a pivotal contract with ADT Commercial.
- Facilitated over $100M in funding, with notable contributions from OpenAI.
- Drove global expansion, laying the foundation for advanced robotics and AI/ML initiatives.

AON3D   *Montréal, Canada*
Engineering Manager   *2018 - 2021*
- Led engineering through $11.5M Series A funding, enhancing 3D printing innovation.

Rogue Research Inc.   *Montréal, Canada*
R&D Engineer   *2011 - 2018*
- Led R&D in medical device innovation, including cognitive neuroscience and veterinary robotic surgery.

Education

École de technologie supérieure   *Montréal, Canada*
Ph.D. - AI and Collaborative Robotics   *2014 - 2019*
- Innovated safer, intuitive collaborative robotics with a thesis on freehand ultrasound, advancing human-robot interaction.
- Developed AI/ML models for improved physical human-robot interaction, redefining controller tuning and calibration.
- Created *Pybotics*, a popular open-source toolbox for robotics kinematics.

McGill University   *Montréal, Canada*
B.Eng. - Mechanical Engineering, Biomedical Engineering   *2010 - 2014*

Skills & Certifications

Certifications	Open Water Diver (PADI), Professional Engineer (Ordre des ingénieurs du Québec)
Technical Leadership	Agile Methodologies, Strategic Innovation, Technology Roadmapping
Software & Tools	CI/CD, Cloud Platforms, Data Engineering, DevOps, Docker, Infrastructure as Code, Simulation
AI/ML Technologies	Computer Vision, Generative AI, MLOps, Natural Language Processing, Reinforcement Learning
Programming Languages	C/C++, Go, Java, JavaScript (Node.js), Python, Rust
Languages	English, French

Select Publications

2020 — **Improved Test Methods for Polymer AM Inter-Layer Weld Strength and Filament Mechanical Properties**, Richard G. Cole, Kazem Fayazbakhsh, Abraham Avalos, Nicholas A. Nadeau. ASTM International Conference on Additive Manufacturing (ICAM).

2019 — **Towards the development of safe, collaborative robotic freehand ultrasound**, Nicholas A. Nadeau. École de technologie supérieure.

2019 — **Pybotics: Python Toolbox for Robotics**, Nicholas A. Nadeau. The Journal of Open Source Software.

2019 — **Impedance Control Self-Calibration of a Collaborative Robot Using Kinematic Coupling**, Nicholas A. Nadeau, Ilian A. Bonev. MDPI Robotics.

2018 — **Evolutionary Motion Control Optimization in Physical Human-Robot Interaction**, Nicholas A. Nadeau, Ilian A. Bonev. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

2018 — **An Extrinsic Dexterity Approach to the IROS 2018 Fan Robotic Challenge Modality B**, Jennifer Kwiatkowski, Jean-Philippe Roberge, Nicholas A. Nadeau, Louis L'Écuyer-Lapierre, Vincent Duchaine. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).

2017 — **Characterization of a robotic micro-surgical system for small-animal neurosurgery**, Nicholas A. Nadeau, Alexandru Ciobanu, Fred Lamer, Mathieu Coursolle, Sean McBride, Stephen Frey, Roch Comeau. Society for Neuroscience.

Volunteer & Committees

2022	**Startup Mentor**, Next AI
2022	**Startup Mentor**, Creative Destruction Lab (CDL)
2021	**Technical Committee ISO/TC 299 - Robotics**, Standards Council of Canada Mirror Committee
2020	**Mentor**, Techstars Montréal AI Accelerator
2020	**Mentor**, FounderFuel Startup Accelerator
2018	**Committee F42 on Additive Manufacturing Technologies**, ASTM International