

Coleman Farvolden

Kingston, Ontario, Canada · coleman@tesryn.com · Founder of Tesryn
colemanfarv.github.io · linkedin.com/in/coleman-farvolden-0601321b8 · github.com/ColemanFarv

Building AI-native engineering at Tesryn. Graduate researcher at Queen's, funded by NSERC and the Vector Institute.

EDUCATION

- MASc, Mechanical and Materials Engineering**2026 – 2028
- Queen's University — NSERC Canada Graduate Scholarship (CGS-M) · Vector Scholarship in AI
- BEng, Mechatronics and Robotics Engineering**2022 – 2026
- Queen's University — GPA 4.14/4.30 · Top 5% of class · Dean's Honour List

RESEARCH EXPERIENCE

- Graduate Researcher** — Ingenuity Labs, Small-Scale Robotics LabMay 2025 – present
- Developing an open-source magnetic micromanipulation system, 3D-printable and adaptable to any inverted microscope.
 - Mapping 3D stiffness gradients as cells grow, linking mechanical properties to how they behave and move.
- Robotics Researcher** — The Perk Lab, Queen's UniversityMay – Aug 2024
- Built a reusable open-source ROS module for motion planning with a low-cost 6-axis arm.
 - Built an electromagnetic tracking system with its sensor built into a 3D-printed tool.

INDUSTRY EXPERIENCE

- Automation Engineering Intern** — an industrial automation distributor, MississaugaMay – Aug 2023
- PLC programming in Omron Sysmac: SQL database management, automated barcode reading, MQTT communication.
 - Assembled machinery from CAD; installed mechanical, electrical and pneumatic systems from engineering drawings.

TECHNICAL SKILLS

ROBOTICS	ROS2, motion planning, SLAM/Nav2, computer vision, optical & electromagnetic tracking
SOFTWARE	Python, C++, C, data structures & algorithms, PyTorch, NumPy, Pandas, Linux
HARDWARE	Embedded systems, circuit design & testing, electromechanical assembly, PLC, 3D printing
DESIGN	SolidWorks, Fusion 360, engineering drawing, FEA, COMSOL
APPLIED AI	LLM agent systems, evaluation, tooling

AWARDS & FUNDING

- D.S. Ellis Memorial Award** — largest graduating award, chosen by classmates
- Vector Scholarship in AI (VSAI)**, \$17,500 — top AI master's students in Ontario
- NSERC CGS-M** — graduate scholarship, 2026
- DAAD RISE Germany**, \$6,000 — ~250 of 2,512 applicants
- Frank B. Lee Memorial Scholarship**, \$16,400 — top 5% of class
- Zurbrigg Memorial Scholarship**, \$6,900 · **Mark Latham Memorial Award**
- Selected: **NSERC USRA** · **Waterloo Rising Stars** · USSRF · Principal's · Dean's List

SERVICE & ACTIVITIES

- Queen's First Aid** — Logistics Officer; previously Supervisor, Responder (2023 – present)
- Canadian Coast Guard** — Inshore Rescue Boat, Halifax (2025)
- Queen's Varsity Triathlon** (2023 – present)
- Ironman Canada**, Ottawa 2026 — 12:46:26
- Ironman 70.3 · Spartan Ultra, Mont-Tremblant