

Shayan Mardaneh

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EDUCATION

Queen's University
BASc. Bachelor of Applied Science, Electrical Engineering

Sept 2024 — Present

- Cumulative GPA: **3.66**
- Activities: Q3C Case Competition, QUESST Case Competition
- Dean's List Scholar - Stephen J.R. Smith Faculty of Engineering and Applied Science
- **Relevant Courses:** Calculus I-II (A+, A), Linear Algebra (A+), Programming in C (A), Introduction to Macroeconomics (A+), Differential Equations (A+), Data Structures & Algorithms (A+), Electric Circuits (A)
- **Ongoing:** Electronics I, Data Science, Computer Architecture, Fundamentals of Electromagnetism, Numerical Analysis, Continuous-Time Signals & Systems

EXPERIENCE

Testing Engineer Intern 🧑 | *Greentank Technologies*

May 2025 — Aug 2025 | Toronto, ON, On-site

- Performed electrical continuity and resistance testing on internal PCBs and battery contact points, detecting and resolving faults that improved **electrical reliability** by approximately **20%** across test batches.
- Conducted **clog and airflow resistance testing** on over 250 consumer hardware units, identifying and flagging inconsistencies that led to a **22% reduction in clog-related** customer returns across two major product lines.
- Participated in team meetings and **brainstorming sessions**, actively contributing ideas and **technical insight** to enhance overall pod design and **efficiency**.
- Developed and standardized **testing SOPs and data logging protocols**, which **improved team-wide testing** by **25%** and reduced **retest frequency** by **10%**.
- Executed TPM (Total Particulate Matter) and vapor output tests on over 60 oil formulations, helping the R&D team enhance vapor consistency and **reduce formulation deviation by approximately 30%**.

Co-Founder and Lead Designer 🧑 | *Tronic Web Agency*

Dec 2023 — June 2025 | Toronto, ON, Remote

- **Co-founded and scaled a six-figure web agency**, generating **\$5,000+ in recurring monthly revenue** through strategic **client outreach, optimized sales funnels, and strong account management**.
- Forged high-value partnerships with prominent organizations including **\$CRASH on Base (mkt cap: \$900M)**, **Teaforguys (\$30K+/month e-commerce brand)**, and **Smarter.loans (trusted by 15K+ Canadian businesses monthly)**, leading **outreach strategy and contract negotiations**.
- **Led a cross-functional team of 10 designers, developers, and strategists to deliver 50+ high-converting client websites**, resulting in an **average 38% increase in customer conversion rates post-launch** through collaborative design, data-driven UX, and performance optimization.
- Designed and developed high-performance **web applications using JavaScript, TypeScript, and React, with modern styling through Tailwind CSS, Shadcn/UI, HTML, and CSS**, resulting in faster, scalable, and visually compelling solutions.

Control Hardware Engineer 🧑 | *Queen's Hyperloop Design Team*

Sept 2024 — Present | Kingston, ON, On-site

- Designed and implemented real-time control hardware for the pod's braking and propulsion subsystems using STM32 microcontrollers, CAN bus communication, and custom PCB assemblies.
- Programmed low-level firmware in **C/C++** to interface hardware with the team's control algorithms, ensuring deterministic response under **high-frequency data loads (500 Hz+ sampling)**.
- Collaborated with software, propulsion, and mechanical teams to synchronize hardware functionality, **resolving 10+ cross-system integration** issues before full pod testing.
- Integrated **pressure, position, and IMU sensors into the control system**, improving feedback precision and reducing **latency by 30 ms**, enabling safer high-speed operation.

EXTRACURRICULARS

Brand Ambassador | Campus Equipment Outfitters

Oct 2024 — Present | Kingston, ON

- Represent Smith Engineering through merchandise promotion and pop-up events, boosting brand visibility by **40%**.

Consultant | Queen's University Business & Engineering

Sept 2025 — Present | Toronto, ON

- Advised on customer growth and digital outreach strategies, identifying key SEO and social funnel improvements projected to **raise traffic by 30%**.
- Presented actionable recommendations to client executives, influencing product marketing and operational decisions adopted for launch-phase improvements.

SKILLS

Languages: C/C++, Python, LaTeX, HTML, CSS

Frameworks: React, Next.js, Node.js, Tailwind, TypeScript

Skills: Communication, Leadership, Engineering Analysis, PCB Design, Soldering, MS Office, MATLAB

Other: Photoshop, Video Editing, Graphic Design, Entrepreneurship, Bloomberg Market Concepts

INTERESTS

Cars (Mercedes-Benz Enthusiast), Guitars & Making Music, Cybersecurity