# Amir Hamadache

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## EDUCATION

**University of Waterloo**                                    Waterloo, ON
*Bachelor of Applied Science, Mechatronics Engineering*      *Sep 2021 – Present*

## EXPERIENCE

**Technical Program Manager Intern**                         Kitchener, Ontario
*FluidAI Medical*                                            *Jan 2025 – Aug 2025*

- Led cross-functional planning and execution of clinical device NPI in **Jira/Confluence**, coordinating hardware, software, and QA teams to achieve **95%** sprint goal completion.
- Streamlined prototype testing by defining validation protocols and managing **risk registers/release gates**, accelerating readiness by **20%**.
- Streamlined QA and analytics by deploying automated reporting pipelines **(Python/SQL)** that synced **Airtable** with **Databricks**, cutting manual effort by **33%** and improving program-level insights.

**Product Manager Intern**                                   Waterloo, Ontario
*University of Waterloo – CCaRT Lab*                          *Sep 2024 – Dec 2024*

- Led hardware design and **BOM** ownership for clinical prototype, using **SolidWorks** and FEA/tolerance validation to deliver **audit-ready documentation** and ensure regulatory compliance.
- Coordinated cross-functional teams to resolve bottlenecks and optimize sourcing, reducing component costs and keeping NPI milestones on track under tight timelines.

**R&D Hardware Engineer Intern**                             Waterloo, Ontario
*Virtek Vision International*                                 *May 2023 – Apr 2024*

- Trained an **AI model** on **600+** images & **2,800+** annotations using CVAT and built a scalable Docker pipeline.
- Led coordination of hardware validation and AI tooling across QA and product engineering teams.
- Designed 3D-printed jigs (tolerance to 0.001") and authored SOPs for laser sensor calibration and QA tooling.
- Automated QA testing via PowerShell scripts, increasing regression efficiency by **15%**; executed **400+** test cases.
- Presented validation data on **5** industrial sensors, shaping product roadmap by influencing sensor selection.

**Quality Engineering Intern**                               New Hamburg, Ontario
*Ontario Drive & Gear Ltd.*                                  *Sep 2022 – Dec 2022*

- Reduced scrap cost by **$30,000** by optimizing tolerance inspection workflows using **CMM** and **gear analyzers**.
- Increased throughput by **15%** by authoring part inspection plans and redesigning production floor layouts.

## PROJECTS

**Mechanical Designer** – Midnight Sun Solar Rayce Team       Jul 2021 – Aug 2022

- Designed **25+** assemblies and FEA-analyzed lightweight components for a solar-powered EV, contributing to automotive-grade subsystem integration in a high-efficiency vehicle platform.
- Built vehicle interior modules for a solar-powered EV platform; balanced lightweighting and manufacturing.

**Founder & Program Manager** – TaqwaCon Convention 🔗        Jan 2023 – Present

- Founded and led TaqwaCon, a **700+** attendee convention across **15+** universities generating **CA$30K** revenue (17% profit) with a **120+** cross-functional team using Gantt charts, risk registers, and stakeholder cadences.
- Delivered a ticketing & analytics platform (requirements, vendor integrations, QA), enabling **40K+** users and **CA$9K** online sales while reducing release issues with QA gates.

## SKILLS

**Product Skills:** Agile Development, Product Development, Strategy & Operations, Cross-functional Leadership, Risk Mitigation, KPI/OKR Tracking, Hiring & Headcount Planning, Goal Compliance

**Technical Skills:** Python, SQL, Databricks, REST APIs, Git, Docker, Linux/Ubuntu, PowerShell, Jira, Confluence, Risk Registers, Gantt Charts, SolidWorks, CAD, GD&T, FEA, CMM, 3D Printing