Sahand Aajami

416.878.5141 | saajami@uwaterloo.ca | https://sahand-aajami.pages.dev/

EDUCATION

University of Waterloo Sep. 2025 – Apr. 2030
Bachelor of Applied Science in Chemical Engineering Waterloo, ON

EXPERIENCE

University of Waterloo Alternative Fuels Team (UWAFT) Sep. 2025 – Present
Propulsion Controls & Modelling Sub team - Core Member Waterloo, ON

- Develop and validate vehicle propulsion control models using MATLAB, Simulink, and Stateflow to support system-level simulation and performance analysis of electric and hybrid vehicle architectures.
- Contribute to an Adaptive Torque Split control project, assisting in the design and refinement of control logic to improve power distribution, drivetrain efficiency, and operational stability under varying vehicle conditions.

University of Waterloo Engineering Jan. 2026 – Present
Engineering Ambassador Waterloo, ON

- Selected as an Engineering Ambassador for strong academic performance and communication skills, leading campus tours and delivering detailed explanations of engineering programs, courses, and university resources.
- Provided mentorship to incoming students by discussing academic expectations, effective study strategies, and student life at Waterloo, reflecting leadership, motivation, and dedication to excellence.

The Packaging Advancement Centre, The Grove Jun. 2025 – Aug. 2025
Engineering Trainee London, ON

- Gained hands-on exposure to industrial packaging systems, materials, and manufacturing equipment, developing foundational understanding of material selection, process flow, and safety protocols.
- Observed engineering applications in sustainable manufacturing, efficiency optimization, and quality control, strengthening awareness of real-world industrial operations and engineering decisions.

PROJECTS

Saponification Process Design and Optimization

- Developed and executed a cost-optimized soap production process ($0.50 per 60 g bar), performing oil selection and precise saponification calculations, applying reaction control principles, ensuring safe handling of corrosive chemicals, and evaluating final product quality.

Water Treatment and Filtration System Design

- Designed and constructed a low-cost, high-efficiency water filtration system using a multi-stage process (coarse and fine filtration, adsorption), applying separation and flow control principles to reduce river water pH from 8.7 to near-neutral (7.0) and demonstrate measurable water quality improvement.

SKILLS & AWARDS

Core Skills: Process Engineering, Manufacturing Operations, MATLAB, Simulink, Python Programming, Data Analysis, Excel, SolidWorks, Laboratory Techniques, Process Safety, Technical Reporting, Technical Communication

Languages: English, Persian, Korean, Turkish

Awards:
University of Waterloo Chem 13 Contest – Ranked 1st out of 2,000+ participants
Avogadro Exam (University of Waterloo) – Ranked Top 230 in North America
Canadian Culture Award – Recognized for academic achievement, leadership, and positive contribution as an English Language Learner graduate