

Zain Rezaei

Master's Student in Mechatronics
B.Sc. Computational Engineering

Salo, Finland
(+358) 442464384
zainrezaei@aalto.fi
[My Webpage](#)
[Github](#) [LinkedIn](#)



Profile & Journey

The Engineer: A Computational Engineering graduate and current Mechatronics Master's student at Aalto University. Proficient in simulation (MATLAB, FEM), embedded programming (Python, Scala), CAD, and hardware integration. Seeking to apply analytical skills to R&D challenges in the sector..

The Journey: Originally from Afghanistan, I moved to Finland in late 2015. My integration journey demonstrates my core professional strength: **rapid adaptability**.

- Mastered the Finnish language within one year.
- Completed High School (Vuosaari Lukio) in just two years.
- Secured a place at Aalto University through top-tier Matriculation Exam results.
- Proud Finnish citizen (since 2022) with native-level fluency.

Education

2024–Present **Master of Science in Technology (Mechatronics)**, Aalto University, Espoo.

Focus: Machine Design, Control Systems, Mechatronic System Simulation.

2021–2024 **Bachelor of Science in Technology (Computational Engineering)**, Aalto University, Espoo.

Focus: Applied Mathematics, Programming, Engineering Physics.

2018–2020 **Finnish Matriculation Examination**, Vuosaaren lukio, Helsinki.

Completed in accelerated timeline (2 years).

Key Engineering Projects (Fall 2025)

Oct – Dec **Detailed Mechanical Design & Simulation (MBS/FEA)**, Aalto University.

- Conducted detailed design of a mechanical transmission system using **Siemens NX**.
- Performed **Multi-Body Simulation (MBS)** to analyze dynamic loads and **Finite Element Analysis (FEA)** to validate structural integrity of gear components.
- Selected critical components (SKF bearings, gearboxes) based on load calculations and ISO standards.
- Produced detailed engineering drawings and assembly renders.

Sept – Nov **Control System Design & Modeling (MATLAB/Simulink)**, Aalto University.

- **DC Motor Control:** Designed and tuned a PI controller for a DC motor system. Analyzed torque, efficiency curves, and thermal limitations using Simulink.
- **Pendulum-Trolley System:** Developed a state-space model for an inverted pendulum on a trolley.
- Implemented system dynamics in **MATLAB** (State-space matrices A, B, C, D) to simulate stabilization and reference tracking.
- Analyzed frequency response (Bode plots) and signal filtering (Low-pass RC filters).

Professional Experience

Jan 2025 – **Co-Founder & Technical Lead**, A2Z-Solutions OY, Salo.

Present

- Founded a digital agency serving Finnish businesses with custom web solutions.
- **Tech Stack:** Leading development using React, Node.js, and Cloud infrastructure.
- Managed the full project lifecycle: requirement analysis (in Finnish), architecture design, and deployment.
- **Relevance to Industry:** Demonstrates project management, client communication, and system architecture skills.

Jun 2024 – **STEM Specialist, Summit Camp & Travel, USA.**

- Aug 2024
 - Taught Discovery classes combining chemistry, engineering, and environmental science
 - Developed adaptive teaching methods for diverse learning needs
 - Managed groups of 30+ participants with varying technical backgrounds

Jun 2021 – **Technical Assistant, Akukon Oy.**

- Aug 2021
 - Integrated cloud-based IT systems for acoustic measurement data
 - Assisted in technical system maintenance and troubleshooting
 - Documented technical procedures and system configurations

Technical Skills

Engineering MATLAB, Simulink, Siemens NX, Autodesk Fusion, Creo (CAD), Finite Element Analysis (FEA), Multi-Body Simulation (MBS), Control Theory (PID, State-Space), Circuit Analysis.

Programming Python (Data/Scripting), Scala, C (Basic), SQL.

Web/IT Git/GitHub, Cloud Infrastructure (Hosting, API), Linux environments.

Soft Skills Complex Problem Solving, Rapid Learning, Technical Documentation, Entrepreneurial Mindset.

Languages

Finnish Native Proficiency (C2)

English Native Proficiency (C2)

Dari (Persian) Native

Certifications

- Occupational Safety Card (Työturvallisuusko-
rtti)
- Hygiene Passport
- First Aid Certificate
- Driver's License (B)

Referees

References available upon request.