

ZOLTAN HEGYI

MECHANICAL ENGINEERING STUDENT

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ABOUT ME

Motivated fifth year mechanical engineering student passionate about innovation and problem-solving. Proficient in engineering software, including AutoCAD and SolidWorks, with hands-on experience in applying theoretical knowledge to real-world projects. Possess effective communication and teamwork skills developed through collaborative projects. I am eager to contribute to innovative projects and thrive in dynamic engineering environments.

EDUCATION

Concordia University

Mechanical Engineering

2020 - Present

Marianopolis College

Pure and Applied Science

2018 - 2020

EXPERIENCE

Electronics TA

Jan 2025 - Present

Concordia

Assisted in delivering tutorials and supervising laboratory sessions for an undergraduate course covering fundamental electronics concepts, including circuit analysis, semiconductor devices, operational amplifiers, and digital logic systems. Guided students in applying theoretical knowledge to practical lab experiments, troubleshooting circuit designs, and developing a deeper understanding of electronic components and digital systems. Provided academic support through problem-solving sessions and hands-on demonstrations.

Manufacturing Processes TA

May 2024 - Present

Concordia

MIAE 312 Lab TA - Instructed students on safety and proper technique in manufacturing processes lab.

MIAE 311 Grader - Graded quizzes and assignments for a large class

Chemical Analyst

May 2021 - Dec 2021

Bureau Veritas

Begun as a Lab Technician and promoted to Chemical Analyst after demonstrating superior curiosity and passion to learn.

As an Analyst, I was responsible for performing analyses on samples and complex samples preparation, following Standard Operating Procedures (SOP's) to ensure accuracy and quality of work, ensuring deadlines are met, and following all laboratory safety rules and regulations.

EXPERTISE

Curious Passionate Enthusiastic

Quick Learner Self Motivated

Critical Thinking Communication Skills

Solidworks C++

PERSONAL PROJECTS

DIY Smart Blinds

- A Nema 17 stepper motor driven by a wifi capable arduino raises and lowers the blinds using a custom designed 3D printed planetary gear train

Home Lab Server Cluster

- Custom router OS running a VPN server allowing me to access my home network from anywhere
- Runs multiple docker containers providing various services such as a self hosted cloud storage as well as an AI assisted photo library and a Plex media server.

Plant Soil Moisture Tracking

- Continuously measures the soil moisture of various plants using an Arduino based development board
- Wirelessly logs moisture data on Raspberry Pi server
- Displays a visualization of historical data in a web application hosted on the Pi

CERTIFICATION

DELFDALF B2 Certification 2018

Nationals Lifeguard Certification 2018

First Aid/CPR Certification 2017

LANGUAGES

English

Native or Bilingual Proficiency

French

Professional Working Proficiency

Hungarian

Native or Bilingual Proficiency