

SUMMARY

A motivated Mechanical Engineering graduate student with a keen interest in Signal Processing, Image Processing, Computer Vision, and Artificial intelligence. Passionate about leveraging cutting-edge skills to innovate engineering solutions. Excited about interdisciplinary possibilities at the intersection of Engineering, Technology, and AI, aiming to contribute significantly.

EDUCATION

Degree	University	Location	GPA	Year
M.Sc	University of Alberta	Edmonton, Canada	3.75/4	2022-2024
B.Sc	University of Zanjan	Zanjan, Iran	4/4	2017-2021

ACADEMIC AND PROFESSIONAL EXPERIENCES

- University of Alberta

Teaching Assistant, Graduate Research Assistant

Edmonton, Canada

2022 - 2024

– TA: Mechanical Engineering Laboratory II (2 Semesters)

– RA: Mechanical Engineering Dept, Faculty of Engineering
- Mitacs

Intern

Canada

2022 - 2024

– Accelerate Program
- SimAltum

Project Marketing Engineer

Canada

Jan 2023 - Mar 2024

– Marketing Research, Content Creation, Promoting Company
- University of Zanjan

Teaching Assistant

Iran

Sep 2018 - Aug 2021

– TA: Computer Programming and Numerical Analysis
- Alborz Turbine

Intern

Iran

June 2020 - Aug 2020

– Enhancing Performance and Efficiency of Gas Turbines
- Iran Khodro Automaker

Intern

Iran

June 2020 - Aug 2020

– Resolving Persistent Mechanical Challenges Through Engineering Expertise

RESEARCH ACTIVITIES

- Conferene Paper

Title: Animal Gait Cycle Signals: Transforming Eulerian to Lagrangian coordinates

March 2024

– Authors: Emran Hamzehnezhad, David S. Nobes, Reza Sabbagh, Ghader Manafiazar, Amir Alizad Rahvar

– Accepted to CSME (Canadian Society of Mechanical Engineering) Conference
- Selected and Presented for the BME Poster Presentation

Title: Advanced Cattle Health Monitoring Through Posture Analysis for Lameness Detection

Oct 2023

– Authors: Emran Hamzehnezhad, David S. Nobes, Reza Sabbagh, Ghader Manafiazar, Amir A-Rahvar
- Selected and Presented for the FEGRS (Faculty of Engineering Research Symposium) Oral Presentation

Title: Automated Analysis of Cow Posture Estimation for Lameness Detection

Aug 2023

University of Alberta

– Authors: Emran Hamzehnezhad, David S. Nobes, Reza Sabbagh, Ghader Manafiazar, A-Rahvar
- Conference Paper

Title: Implement.of Mach. Learn for Volt. generation fr. a piezo material

Mar 2021 - Apr 2021

– Authors: Emran Hamzehnezhad, Jafar Ghazanfarian, Mohammad M Mohammadi

TECHNICAL SKILLS

- Programming Languages:

Python, Matlab, C++, Fortran
- Advanced Technologies:

Deep Learning, Machine Learning, Computer Vision
- Software:

MATLAB, SolidWorks, Ansys Fluent
- Other:

Website Design (HTML, CSS, JavaScript), Marketing Skills, Content Creation Skills, Microsoft Office Tools, Latex
- Key Competencies:

Strong Communication, Collaboration, Project Management, Analytical, and Problem-solving Skills.

ACTIVITIES, MEMBERSHIP, AND VOLUNTEERING

- **Activity:** 1. FEGRS Symposium Organizing Committee 2024 at the University of Alberta: Leader of the Advertising and Marketing Team for the Symposium
- **Activity:** 2. Faculty Stewards Committee in GSA (Graduate Student Association) at the University of Alberta: Labour Relations Committee
- **Activity:** 3. Member of the Scientific Association of Mechanical Engineering Department at the University of Zanjan, Iran
- **Volunteering:** 1. Presenting Undergraduate/ Teachers/ Students workshop for explaining 3D Camera Insights/Applications (several workshops for each group) at the University of Alberta
- **Volunteering:** 2. Volunteered to Organize the Faculty of Engineering Graduate Recruitment Session at the University of Alberta
- **Volunteering:** 3. Volunteered to Organize the Dean’s Research Award Program at the University of Alberta
- **Volunteering:** 4. Organizing Webinars and Workshops for students to explore a diverse range of Engineering software and Programming Languages

CERTIFICATIONS

- **Python for Computer Vision with OpenCV and Deep Learning**, Udemy
- **Machine Learning** Coursera
- **Project and Time Management Course Bundle**, Mitacs
- **Communication Skills**, Mitacs
- **Career Skills**, Mitacs
- **Leadership Skills Course Bundle**, Mitacs
- **Institutional Animal User Training Program Part II**, University of Alberta
- **Basic Principles of Animal Ethics and Welfare of Animal Use Stream(s): Livestock**, University of Alberta

TAKEN COURSES

- **University of Alberta**

Graduate Courses

Edmonton, Canada

 - Assessment and Analysis of Biomechanical Motion
 - Image Processing and Analysis in Diagnostic Imaging
 - Signal Processing of Time and Spectral Series
 - Advanced Topics in Engineering Management(Technical Communications for Engineers)