Alireza Beigi

Embedded Software Developer

Innovative Mechatronic Engineer, Passionate about creating and devising new systems, Goal-oriented self-starter with the capacity to operate independently.

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github.com/AlirezaBeigiMech

EDUCATION

Mechatronic Systems Engineering, MASc,
Simon Fraser University,

01/2022 - Present — *Surrey, Canada*

Courses

- Industrial Control (PLC)
- Design Optimization

Mechanical Engineering, BASc,
University of Tehran,

07/2015 - 07/2019 — *Tehran, Iran*

Courses

- Neural Networks
- Machine Learning
- Numerical Analysis
- Automatic Control

WORK EXPERIENCE

ADCS Co-Lead
SFU Satellite Design

04/2022 - Present — *Surrey, Canada*

Aviation and Aerospace Component Manufacturing

Achievements/Tasks

- Data Acquisition from Sun Sensor and IMU, Implemented Control schema on TMS570
- Managed a team of 5 undergrad students for embededd software design **(C Embedded, FreeRTOS)**

Research Assistant
Simon Fraser University

01/2022 - Present — *Surrey, Canada*

Achievements/Tasks

- Worked on PEMFC for fault detection. Developed framework based on Spectroscopy method and frequency response to analyze the performance of the fuel cells

Teaching Assistant
Simon Fraser University

04/2022 - Present — *Surrey, Canada*

Achievements/Tasks

- Mechatronic Design II : provided lab instruction and troubleshooting, demonstration for building Ball throwing mechanism **(Matlab Simulink and Arduino)**
- Engineering Graphics and Design: provided lab instruction and demonstration related to designing grid body **(Solidworks)**

Contact : Dr. Vijayaraghavan, Dr. Moallem

Startup Co-Founder
iLiber

07/2019 - 02/2022 — *Tehran, Iran*

Centralized cryptocurrency exchange

Achievements/Tasks

- Created Business Model, Customer Persona and Market Research

SKILLS

C programming | Microcontroller | Robotics | Embedded Software Engineering | RTOS | Python | Control System | Nonlinear Control | Neural Network | Reinforcement Learning | Matlab | Solidworks

PERSONAL PROJECTS

Single Side Self-Balancing Cubli Block (01/2019 - 09/2019)

- Design and manufacture of a Cubli with reaction wheel

Remotely operated underwater vehicle (01/2017 - 01/2018)

- Control of a robotic ROV motors and sensor by serial communication Gained experience in working with CNC machine and Laser machine

Torque Sensor (11/2018 - 09/2019)

- Design and manufacture of a Torque transmitter implemented in Jaw coupling

Nonlinear Control Simulation (07/2019 - 07/2021)

- Implemented Neural-Network based Controller for different plants and publishing paper Google Scholar

HONORS AND AWARDS

SFU Special Graduate Entrance Scholarship (SGES)

Awarded 4nd place of qualifying competitions for Remotely operated underwater vehicle (ROV)

Offered fellowship to study at the University of Tehran for graduate program without entrance exam

CERTIFICATES

Introduction to Embedded Systems Software and Development Environments (09/2022 - Present)

Embedded Software and Hardware Architecture (09/2022 - Present)

LANGUAGES

English

Full Professional Proficiency

INTERESTS

Volleyball | Hiking | AI | Violin | Ice Skate