Parsa Bakhshandeh, M.A.SC.

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LinkedIn

PROFILE

A passionate mechanical engineering graduate with a Master of Applied Science degree from the University of British Columbia. Conducted research on CNC machining for the past two years. Experience in mechanical design, machining, and 3D CAD modelling. Strong problem-solving skills and experience with various software such as SOLIDWORKS and MATLAB.

WORK EXPERIENCE

Research Assistant at The University of British Columbia, Vancouver, Canada
September 2020 — December 2022

- Developed a digital twin system for monitoring and control of 5-axis CNC machine
- Reduced false tool breakage, tool wear and chatter alarm by optimizing the detection algorithms in CNC machine
- Estimated cutting force from rotary accelerometer using a Kalman-Filter-based algorithm in CNC machine

Mechanical Intern at Durali System Design and Automation, Tehran, Iran
April 2019 — January 2020

- Worked as part of the team for thermal analysis of a "2.5 MW Wind Turbine Gearbox" using KISSSOFT
- Worked in a team on 3D modeling of a designed fuel skid P&ID using SOLIDWORKS
- Assembled electromechanical telescopic actuator designed for the vertical movement of heavy loads in workshop
- Prepared mechanical drawing for patent submission of a robotic system

Mechanical Intern at Parsa Souleh Steel Structures, Rasht, Iran
June 2018 — August 2018

- Gained fundamental knowledge in welding and beam/column manufacturing

Teaching Assistant at The University of British Columbia, Vancouver, Canada
September 2021 — December 2022

- Supervised students in Computer Control of Mechatronics Systems, Mechanical Vibrations, and Machine Design

Teaching Assistant at Sharif University of Technology, Tehran, Iran
September 2019 — July 2020

- Conducted tutorials in Engineering Graphics, Dynamics of Machinery, Machine Elements Design and Reverse Engineering

SOFTWARE SKILLS

MATLAB/SIMULNIK, SOLIDWORKS, CATIA, SIEMENS NX, CNC PROGRAMMING, C/C++, PYTON, ARDUINO, LabVIEW, MICROSOFT OFFICE

MAIN PROJECTS

The University of British Columbia, Vancouver, Canada
September 2020 — December 2022

- Trajectory generation and controller design for a ball screw driven XY table using MATLAB/SIMMULINK

Sharif University of Technology, Tehran, Iran
September 2016 — July 2020

- Bachelor Project: Suppression of undesirable chatter vibrations in nonlinear machining process by vibration absorber
- Created simulation and trajectory generation of a SCARA robot using MATLAB/SIMMECHANICS, demonstrating a strong grasp of robotics principles
- Implemented control of a suspended pendulum with a PID controller using MATLAB/SIMULINK
- Created a model of a BMW M6 surface using SOLIDWORKS, showing expertise in 3D CAD design and solid modeling

EDUCATION

Master of Applied Science in Mechanical Engineering, The University of British Columbia, Vancouver, Canada
September 2020 — December 2022

Bachelor of Science in Mechanical Engineering, Sharif University of Technology, Tehran, Iran
September 2016 — July 2020

Structural Engineering of Industrial Facilities Summer School at North Rhine-Westphalia Technical University, Aachen, Germany
July 2019

REFERENCE

Professor Yusuf Altintas, The University of British Columbia, Vancouver, Canada
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