Mohamad Reza Sadeghi

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LinkedIn ID: mrezasadeghi
GitHub ID: mrezasadeghi

Education

Iran University of Science and Technology (IUST) — *Tehran, Iran*
BS in Mechanical Engineering — *Since 2017*
- Thesis: Fault Detection of Bearings Using EMD & Deep Learning (FLANN)
- 3rd rank, score: 18.6 out of 20
- Relevant Coursework: Mechatronics, Automatic Control, Measurement Systems, CM & NDT

Salam Highschool — *Tehran, Iran*
Diploma of Math & Physics — *2016-2017*
- In the best one percent of applicant
- Score: 19 out of 20
- Acceptance in Physics (1st stage) and Astrophysics (1st stage)

Other Relevant Extracurricular courses — *Tehran, Iran*
- Bayesian Signal and Image Processing (ISAV)
- Deep Learning Summer School (Kharazmy University)
- Bayesian statistics (Coursera)
- NDT Workshop (Tehran University)
- General Engineering Acoustics (ISAV)
- Other: Advanced SolidWorks, MATLAB & Abaqus

Academic Experiences

National Iranian Gas Transmission Company (NIGTC) — *Tehran, Iran*
Research Assistant — *Since 2019*
- Data analysis, turbine flow meters health monitoring
- Designing a smart alarm system for TBS/DRS stations
- Diagnosis of flow meters using artificial intelligence (AI)

Iran University of Science and Technology (IUST) — *Tehran, Iran*
Tutor & Teacher Assistant — *Since 2018*
- Vector dynamics (TA), Dr. Rajabi (2021)
- Mechanical vibration (TA), Dr. Rajabi (2020)
- MATLAB Courses – Held two beginner course and one advanced course
- Tutored students to build a smart greenhouse (2019)
- Guided student to design & build a smart alarm for apartments (2021)
- Machine Dynamics & Vibration Lab Assistant

July 2021

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Professional Experiences

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Lambert Mech (Personal Projects)   *Tehran, Iran*
R&D Engineer and Designer   *Since 2017*
- Monitor and control PMDC motor (for Ava Polymer industry)
- Design & build yarn winder machine prototype
- Prediction flow parameters using AI (LSTM & ConvLSTM)
- Analyzing anthropometric data using AI
- Design & optimize a composite gear for power transmission
- A visualization package for Heisler Charts (Uploaded on Pypi & Github)
- Build & design a drawing machine

IPC Company   *Tehran, Iran*
Part-time Mechanical Designer   *summer 2020*
- Laser cut design for PMMA (Plexiglass) panels
- Sheet metal designing for industrial power switching supplier

Nabz Group   *Tehran, Iran*
R&D Intern   *summer 2019*
- Conduct research about Blood Pressure Measurement Devices
- Acoustic analysis of a stethoscope (Abaqus)
- Build & Design small acoustic chamber

Nilper Company   *Tehran, Iran*
Design Intern   *summer 2018*
- Learning manufacturing processes
- Design furniture models (Solidworks)

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Publications

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Under Publication Articles:
- M. Rajabi, Y. Kaardan, M. R. Sadeghi (2021), Deep Convolutional Neural Network for Remaining Useful Life for, PHM Challenge.
- M. Rajabi, M. R. Sadeghi (2021), Fault Diagnosis Using Functional Ling Artificial Neural Network (FLANN) for Turbine Flow Meters.
- M. Rajabi, M. R. Sadeghi (2021), Flow Condition Monitoring, Case Study: Safety Vent of TBS/DRS Stations.

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Skills & Interests

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Research Interests: Control, Deep Learning & Condition Monitoring
Language: English (IELTS 6.5) – Persian (Native)
Computer: MATLAB & Simulink, Python, Abaqus, SolidWorks and C++
Hobbies: Mountaineering and Swimming

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