

Farhad Hamidi

PHD STUDENT IN MECHANICAL ENGINEERING ·

Tehran, Iran

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“Be the change that you want to see in the world.”

Summary

My name is Farhad Hamidi, currently a PhD student in mechanical engineering at Amirkabir University of Technology in Tehran. I earned my master's degree in mechanical engineering with a focus on applied design from Shahid Beheshti University and I graduated as the 2nd-ranked among M.Sc. students.

I began my professional experience in the field of rotating equipment at the consulting engineering company "Tadbir and Fan Asia." I am familiar with standards such as API-610, API-620, API-674, API-650, and ASME BPVC. Additionally, I have work experience at the Abadan Oil Refinery, where I dealt with various process equipment such as pumps, valves, heat exchangers, and more. I am proficient in reading process flow diagrams (PFD) and piping and instrumentation diagrams (P&ID).

I am well-versed in various mechanical software and technical documents, including specifications, datasheets, material requisitions (MR), and technical bid evaluations (TBE). Some of my ethical qualities include a strong work ethic, adaptability to the environment, responsibility, an interest in teamwork, collaboration beyond job duties, and a high learning ability.

Education

Amirkabir University of Technology

PHD STUDENT IN MECHANICAL ENGINEERING

Tehran, Iran

Sep. 2023 - present

- **Field of study:** Dynamics, vibrations and control
- Selected as the Exceptionally Talented Student in the PhD program (Admitted without exam)

Shahid Beheshti University

M.Sc. IN MECHANICAL ENGINEERING

Tehran, Iran

Oct. 2021 - Sep. 2023

- **GPA:** 17.64/20
- **Field of study:** Dynamics, vibrations and control
- Ranked **2nd** among 17 M.Sc. students of Mechanical engineering(Applied Design)
- **Thesis:** Autonomous Navigation in Unknown Environment for Differential Drive Robot Using Reinforcement Learning

Petroleum University of Technology

B.Sc. IN MECHANICAL ENGINEERING

Abadan, Khuzestan, Iran

Sep. 2017 - Aug. 2021

- **GPA:** 16.82/20
- Ranked **2nd** among 23 B.Sc. students of Mechanical engineering
- **Thesis:** Ultrasonic Nondestructive Evaluation Using Artificial Intelligence(19.75/20)

Work Experience

Mechanical Engineer

ABADAN OIL REFINERY

Abadan, Iran

Nov. 2022 – Aug. 2023

- Reading and interpreting PFD (Process Flow Diagram) and P&ID (Piping and Instrumentation Diagram) drawings.
- Familiarity with pumps and valves
- Knowledge of other process equipment such as heat exchangers, compressors, distillation columns, etc.
- Collaborating with other engineering disciplines to ensure the integration of mechanical systems within the refinery.
- Providing technical support to operations personnel during plant shutdowns or emergencies.

Rotating equipment engineer

TADBIR VA FAN-E ASIA CONSULTING ENGINEERS

Tehran, Iran

Jun. 2022 – Oct. 2022

- Meets with clients' technical staff to discuss technical information and features.
- Prepares sketches and performs calculations for a detailed segment of a project.
- Prepares equipment specifications, inquiry and purchase requisitions for approval.
- Evaluates vendors' bids and drawings to assure compliance with specifications.
- Participates in the preparation of equipment Specification, Datasheet,...

Computer & Programming Skills

Engineering softwares	ROS, Gazebo, Solidworks, Simatic Manager, FLuidSIM, Catia, Abaqus
Programming languages	Python, MATLAB
Python libraries	NumPy, Matplotlib, Pandas, Tensorflow
Other Softwares	Microsoft Office

Academic Projects

Build Software for FEM Analysis of 2D and 3D Truss

FEM COURSE

- Using App Designer and Matlab Software.

Tehran, Iran

Oct. 2023 – Des. 2023

Modeling and Control of 3-DOF Articulated Manipulators (RRR) using MRCs

ADAPTIVE CONTROL COURSE

- Using Simulink and Matlab Software.

Tehran, Iran

Feb. 2023 – Jun. 2023

Bearing Features Extraction Using Python

SIGNAL PROCESSING COURSE

- Using Numpy, Pandas and Matplotlib.
- [See project in Github](#)

Tehran, Iran

Feb. 2023 – Jun. 2023

Design Controller Using PID and Pole Placement Methods

ADVANCED CONTROL COURSE

- Design Controller for Balance Rotary Inverted Pendulum.

Tehran, Iran

Sep. 2022 – Feb. 2023

Image-based surface defect detection using convolutional neural network

FRACTURE MECHANICS COURSE

- Using QT Quick and Python programming language, I build a composite question calculator software.

Abadan, Iran

Feb. 2021 – Jun. 2021

Create artificial neural network model for predict crack depth and length

BACHELOR PROJECT

- Using Python programming language and Deep Learning libraries

Abadan, Iran

Nov. 2020 – Jun. 2021

Feature extraction from ultrasonic signals and create dataset

BACHELOR PROJECT

- Using Python programming language and Feature extraction libraries

Abadan, Iran

Nov. 2020 – Jun. 2021

Build composite Calculator software using Python and Qt Creator

COMPOSITE COURSE PROJECT

- Using QT Quick and Python programming language, I build a composite question calculator software.
- [See project in YouTube](#)

Abadan, Iran

Feb. 2021 – Jun. 2021

Do a project using MSP software for a project control management course

PROJECT CONTROL MANAGEMENT COURSE

- Extracted WBS using MindView software and calculate project progress,... using MSP software.

Abadan, Iran

Sep. 2020 – Jan. 2021

Simulation the bottoming steam Rankine cycle (SRC) and organic Rankine cycle (ORC) systems for a triple combined system using gas turbine (GT) as topping cycle

ADVANCED ENERGY SYSTEMS COURSE

- In this project, using Ebsilon Software and python(CoolProp Library), I simulate a triple combined system(SRC-ORC-GT).

Abadan, Iran

Sep. 2020 – Jan. 2021

Static analysis and calculation of stress concentration factor in four geometries

FINITE ELEMENT METHOD COURSE

- In this project, with using Ansys Apdl software and finite element method (FEM), I calculate stress concentration factor and maximum stress in four geometries.

Abadan, Iran

Sep. 2020 – Jan. 2021

Honors & Awards

2021-2023 **Ranked 2nd**, among 17 M.Sc. students of Mechanical Engineering(Applied Design), Shahid Beheshti university

2021 **Top 3%**, Iran M.Sc. entrance exam(konkour) in Mechanical Engineering

2017-2021 **Ranked 2nd**, among 23 B.Sc. students of Mechanical Engineering, Petroleum university of technology

2017 **Top 5%**, Iran B.Sc. entrance exam(konkour) among 3rd exam region applicants

Publication

Advanced structural mechanics journal

Shahrekord, Iran

A NOVEL METHOD FOR DETECTING THE TYPE OF SURFACE DEFECTS OF HOT ROLLED STEEL STRIP USING THE CONVOLUTIONAL NEURAL NETWORK

May. 2023

Seyed Mohammad Hossein Sharifi, **Farhad Hamidi**, Sajjad Chabokru

Certificates

Learning SOLIDWORKS : For Students, Engineers, and Designers

Udemy

SEE CREDENTIAL

Oct. 2021

Credtional ID:UC-b01bcb60-d5a4-4639-b9c3-6fe22d4cdc3d

Programming for Everybody (Getting Started with Python)

coursera

SEE CREDENTIAL

Sep. 2020

Credtional ID:a061ebbf835b8c8f34940219385da0f

What is Data Science?

coursera

SEE CREDENTIAL

Nov. 2020

Credtional ID:64dcf1c84c2cf6dcb3db2bdc6f9bdb98

Refinery processes

Petro Paydar Iranian

SEE CREDENTIAL

Mar. 2020

Credtional ID:PHASE13-308

PFD P&ID

Petro Paydar Iranian

SEE CREDENTIAL

Mar. 2020

Credtional ID:PHASE13-446

Languages

English

Limited working proficiency

Arabic

Native

Persian

Native