Curriculum Vitae
Hamid Manouchehri

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Education:

➤ **Master of Science in Mechatronics Engineering**   **Tehran, Iran**
   University of Tehran   **2019 - Feb 2023**
   Thesis title: *A Model-Based Control System for Bi-Manual Object Manipulation* (link)
   Related Passed Courses: Advanced Math, Mechatronics, Dynamics, Advanced Robotics, Nonlinear &
   Fuzzy Control, Machine Vision (audited), Bio-inspired Computing

➤ **Bachelor of Science in Electrical Engineering (Control Engineering)**   **Kashan, Iran**
   University of Kashan   **2015 - 2019**
   Project title: *Design and Manufacturing of Pneumatics Table of Instrumentation Lab* (link)
   Related Passed Courses: Calculus, Computer Programming (C), Circuit Theory, Electronics &
   Microprocessor, Digital Signal Processing, Communication Systems, Linear, Advanced & Digital
   Control, Linear Algebra, Industrial Control, Instrumentation, Industrial Automation

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Research Interests:

- **Legged Locomotion**
- **Machine Vision**
- **Robotic Manipulators**
- **Autonomous Mobile Manipulators**
- **Underactuated Robotics**
- **AI, particularly for robotics applications**

Teaching Experience:

➤ **Teacher Assistant**   **Spring 2017**
   Instructor: [Dr. Farzan Rezaei](link)
   Course: Digital Logic and Computer Design
   Responsibilities: Teaching applications of '*Proteus Design Suite*' in digital circuit analysis
   and design, and mentoring the students.

Project and Research Experiences:

➤ Implementation of **Ant Colony Optimization (ACO)** in **Vehicle Routing Problem** and   **Apr 2021**
   Genetic Algorithm in a **Decision-Making Problem**. (link)
   Instructor: [Dr. Masoud AsadPour](link)
   Course: Bio-inspired Computing

➤ Implementation of a **PID Controller** by **Fuzzy Logic** (Self-organizing Fuzzy PID Controller) **Jan 2021**
   Instructor: [Prof. Aghil Yousefi Koma](link)
   Course: Fuzzy Systems: Theory and Control

➤ Simulation of a **Wheeled Inverted Pendulum** by **Partial Feedback Linearization** (link) **Feb 2021**
   Instructor: [Dr. Khalil Alipour](link)
   Course: Nonlinear Control Systems Design

➤ Design and Manufacturing of a **3-DOF Robotic Manipulator (MeArm)** (link)   **Mar 2020**
   Instructor: [Dr. Mohammad Dehghani](link)
   Course: Advanced Robotics

➤ Design and Simulation of a **Pipe-inspection Robot** in SolidWorks (link)   **Feb 2020**
   Instructor: [Dr. Alireza Hadi Hosseinabadi](link)
   Course: Mechatronics 2

➤ **Fanavard Competition of Sharif University of Technology**
  → As a team, we were planning to run an E-Commerce **startup** to provide online repairing services.

Skills:

➤ **Robotic Softwares / Middlewares:** Robot Operating System (ROS 1), RBDL toolkit, RViz, MOVEit, OpenCV (familiar), RoboDK (familiar)
➤ **Programming Languages:** C (Professional), Python, C++, C#, bash script, XML, Lua
➤ **Technical Softwares:** MATLAB (Script, Simulink, GUI), Proteus, Altium Designer, Docker
➤ **Mechanical Softwares:** SolidWorks, FreeCad (familiar), MCS Adams
➤ **Embedded Systems:** MPLAB X IDE (PIC MCUs), Keil (ARM MCUs), CodeVision (AVR MCUs), Raspberry Pi Pico MCU, Arduino IDE, Raspberry Pi (Raspbian OS), NodeMCU, SIM800L GSM
➤ **Version Control Tools:** Git, GitHub, GitLab
➤ **Linux:** LPIC-1 (Linux Professional Institute)

Working Experience:

➤ **Electronics Engineer, Part-time** (link)
  Employer: Parmis Smart Home
  Business: Design of smart devices for BMS (Building Management System)
  Responsibilities: Embedded system designer, Firmware developer of PIC MCUs

  Isfahan, Iran
  Mar – Dec 2021

➤ **Electronics Engineer, CAD Designer, Part-time** (link)
  Employer: Kanda Idea Company
  Responsibilities: Research and Development, Designing a box for some electrical devices with SolidWorks

  Tehran, Iran
  Feb – Nov 2020

➤ **Windows Software Developer, C# programmer, Internship**
  Employer: Behyar Sanaat Sepahan Co.
  Responsibilities: Development of windows softwares in VisualStudio (WPF), C# programming

  Isfahan, Iran
  Jun – Aug 2017

Certificate:

Robot Operating System **(ROS)**: Basic, offered by **PISHROBOT**, approved by **ROBOTIS**
Covered topics: Basic concepts of ROS 1 (melodic), navigation of TurtleBot in RViz as final project.

Sep 2021

Language Proficiency:

Exam	Overall Score	Scores
TOEFL iBT (Mar 12, 2023)	-	-
GRE General (Apr 17, 2023)	-	-

References:

Dr. Mohammad Shahbazi	M.Sc. Supervisor	Assistant Professor | School of Mechanical Engineering Iran University of Science and Technology Email: shahbazi@iust.ac.ir, HomePage, Google Scholar
Dr. Bahrām Tarvirdizadeh	M.Sc. Supervisor	Associate Professor | Faculty of New Science and Technology University of Tehran Email: bahram@ut.ac.ir, HomePage, Google Scholar
Dr. Alireza Hadi Hosseinabadi	M.Sc. Advisor	Associate Professor | Faculty of New Science and Technology University of Tehran Email: hrhadi@ut.ac.ir, HomePage, Google Scholar

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