Arman Javan Sekhavat Pishkhani

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EDUCATION

Master's Degree, Mechatronics Engineering **Present**
University of Tehran TEHRAN, IRAN

- Supervisor: Dr. Khalil Alipour

Bachelor's Degree, Mechanical Engineering **2020–2024**
K. N. Toosi University of Technology TEHRAN, IRAN

- GPA: 3.79/4 (17.95/20) – 3.81/4 (17.99/20) Last two years
- Thesis Title: Design of a Controller for a Robotic Bicycle Using Intelligent Control Techniques
- Thesis Grade: A (19.00/20)
- Supervisor: Dr. S. Hossein Sadati

High School Diploma, STEM **2017–2020**
National Organization for Development of Exceptional Talents (SAMPAD) RASHT, GUILAN

RESEARCH INTERESTS

- Robotics
- Reinforcement Learning
- Control Theory

TEACHING EXPERIENCE

Teaching Assistant, Machine Vision **Sep. 2025 – Present**
Department of Interdisciplinary Sciences and Technologies, University of Tehran
Presented by Dr. Hanieh Naderi

- Designed problems for assignments and exams

Teaching Assistant, Automatic Control **Sep. 2023 – Jan. 2024**
Mechanical Engineering Department, K. N. Toosi University of Technology
Presented by Dr. Naser Naserifar

- Conducted exercise-solving classes
- Produced educational materials

Teaching Assistant, Computer Programming **Feb. 2022 – Jun. 2022**
Mechanical Engineering Department, K. N. Toosi University of Technology
Presented by Dr. Farschad Torabi

- Conducted exercise-solving classes focused on programming in C++ using the Qt framework
- Produced educational materials

TECHNICAL EXPERIENCE

- **Simulation and Control of a 5RP Robot Arm**
  Design, Simulation, and Implementation of Various Control Techniques on a 5RP Robotic Manipulator
- **Mobile Robot Control System (teamwork)**
  Design of a PID-based control system for a mobile robot. A GUI application served as a control panel. The user was able to draw the desired path of the robot in the control panel
- **Control of a Two-wheeled Mobile Robot**
  Design of a controller for a two-wheeled mobile robot using pole-placement and LQR
- **Passive Steering Wheel (teamwork)**
  Design of a CNN model capable of estimating the steering angle from an input image of a steering wheel
- **Automatic License Plate Recognition**
  Design of an ALPR system by integrating classical and modern computer vision techniques

PUBLICATIONS

- **Gray-Box Computed Torque Control for Differential-Drive Mobile Robot Tracking**
- **Optimal Intelligent Control of Robotic Manipulators with Optimal Reliance on Physics Information**

TECHNICAL SKILLS

- Programming languages and mathematical packages: C, C++, MATLAB, Python
- Software libraries and frameworks: JAX, OpenCV, Keras, MuJoCo, Qt
- Computer aided design: SOLIDWORKS
- Development boards: ESP32, Arduino
- Operating systems: Windows
- Other: Simulink, Deep RL, Socket Programming, LaTeX

COURSES STUDIED

Course Name	**Grade (out of 20)**
Advanced Robotics	19.83
Machine Vision	20.00
Optimal Control	18.75
Fundamentals of Electrical Engineering I	20.00
Fundamentals of Electrical Engineering II	19.50
Neural Networks	19.00
Modern Control	18.80
Automatic Control	17.34
Introduction to Mechatronics	18.00
Measurement and Control Systems	18.50
Mechanisms Design	18.00

Engineering Drawing II	19.60
Mechanical Vibrations	20.00

CURRENT RESEARCH

Integrating deep reinforcement learning with nonlinear control techniques to control uncertain robotic systems

HONORS AND AWARDS

- **Ranked within the top 10% of mechanical engineering students from the same year of entrance**
  Issued by K. N. Toosi University of Technology • Sep. 2024
- **Ranked within the top 1.5% in the Iranian University Entrance Exam**
  Issued by National Organization of Educational Testing • Sep. 2020

LANGUAGES

- **English**
  Proficient
  TOEFL iBT score: 90
- **Persian**
  Native language

REFERENCES

Farschad Torabi, Associate Professor
Department of Mechanical Engineering
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