BEHYAD ZARNAGHI

Phone: +98-938-9528138
Email Address:
behyadzarnaghi.meut@yahoo.com

LinkedIn: Behyad Zarnaghi
GitHub: BehyadZed

RESEARCH INTERESTS

Autonomous Robotics, Multi Agent Robots, Human and Robot Interaction, Computer Vision

EDUCATION

B.Sc. University of Tehran, Mechanical Engineering *September 2019 – July 2024(Expected)*
GPA of 18.27/20 (3.92/4)

RESEARCH EXPERIENCE

Summer internship at Middle East Technical University, ROMER Lab *Summer 2023*
Ankara, Turkey
Under supervision of Prof. **Erol Şahin**

- Researched on flocking algorithms of drones in swarm robotics.
- Worked with ROS frame work on Ubuntu in order to implement simulation of the swarm robotics prior testing the robots physically.
- Controlled drones' commands with ROS topics and creating subscriptions and publishers between nodes.

WORK EXPERIENCE

Pooyesh Injection**. Inc** University of Tehran   *July 2022 – Present*
Tehran, Iran
Position

- Designed and assembled mechanisms such as step feeders, sorters and gates for different parts which are involved in the final product of the company.
- Developed multiple codes by in order to control servomotors, sensors, actuator modules and cameras (Pi Camera Vision) which led to minimum requirement of human presence on-site.
- Experienced with raspberry pi boards and raspberry OS.

VFTT. Inc (Vira Fanavar Tural Tabriz)   *April 2021 – January 2022*
Tabriz, Iran
Position

- Assigned as a product designer, working with SolidWorks.
- Developed fuselage of innovative air sanitizers to improve indoor air quality and reduce the spread of airborne diseases using additive manufacturing.
- Minor working experience with electronic circuits, PCB and soldering.

HONORS AND AWARDS

Ranked in the top 15% of the mechanical engineering department *2023*
Based on 7 academic semesters studying at the Mechanical Engineering
department, I have been ranked as 16th student among approximately
130 active students of my class.

Received SFUT scholarship *2021*
Based on academic transcripts, I gained a scholarship, organized by
the Supporter Foundation of the University of Tehran.

Achieved sub-1000 national rank in the university entrance exam *2019*
Ranked as 639th student of the annual university entrance exam among
approximately 150,000 participants (Top 1%).

TEACHING EXPERIENCE

- **Mechanics of Materials (TA)**, Mechanical Engineering Department *Fall 2021*
  Coordinated grading, feedback and assessment.
- **Machine Dynamics (TA)**, Mechanical Engineering Department *Fall 2021*
  Developing exams, quizzes and educational content
  about ADAMS software.
- **Dynamics Laboratory (TA)**, Mechanical Engineering Department *Fall 2022*
  Lab session Instructor, coordinated grading,
  feedback and assessment.
- **Neural Networks (TA)** Computer Engineering Department *Fall 2023*
  Developing educational content.

PATENTS

Patent for "Smart Air Sanitizer Lamp" *November 2022*
Patent Number: 108316 in State Organization for Registration of Deeds and Properties
Smart Air Sanitizer Light With Remote Control is a multi-threading device that is concerned
with disinfecting air, using high-frequency ultraviolet light.

LANGUAGES

English: TOEFL exam to be taken in the midst of October

Azerbaijani: Native Language

Persian: Native Language

Turkish: Professional Proficiency

SKILLS

- **Solid Works**, 3d Designing and familiar with sheet metal option
- **3D printing** Experienced with FDM and DLP printers
- **Machine Learning Libraries**, Experienced with pytorch, keras, scikit-learn, numpy, pandas.
- **Neural Network Models**, Proficient with MLP, CNN, LSTM and Autoencoder models
- **Linux**, Experienced with Ubuntu OS, bash and zsh scripts
- **ROS**, Acquired practical skills in order to control and simulate complex robotics systems with ROS frame work
- **Docker**, Familiar with containers and images.

HOBBIES

Apart from my academic and working life, I am a semiprofessional guitar player. Moreover, I am a member of the musical club at the university.

REFERENCES

Dr. Alireza Sadeghi [Associate Professor]
[Mechanical Engineering Department (Manufacturing)]
[University of Tehran]
Phone: [+98-021-6111-5236]
Email: [Alireza.sadeghi@ut.ac.ir]

Dr. Arash Bahrami [Assistant Professor]
[Mechanical Engineering Department (Dynamics, Controls, and Vibrations)]
[University of Tehran]
Phone: [+98-021-6111-5217]
Email: [arash.bahrami@ut.ac.ir]

Dr. Abbas Rastgo Ghamsari, [Professor]
[Mechanical Engineering Department (Applied Design)]
[University of Tehran]
Phone: [+98-021-6111-5222]
Email: [arastgo@ut.ac.ir]

Dr. Farzad Shirazi, [Assistant Professor]
[Mechanical Engineering Department (Applied Design, Dynamics, Controls, and Vibrations)]
[University of Tehran]
Phone: [+98-021-6111-4016]
Email: [fshirazi@ut.ac.ir]