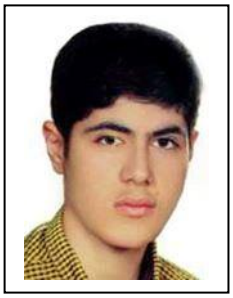

M. Mahdi. Karimi

Webpage: ***https://mm-karimi.github.io/***

Contact Information: ***mohammadmahdikrimi@gmail.com***
Phone Number: ***0098 9030266330***

PROFILE: During my four-year undergraduate program, I specialized in electrical engineering, focusing on electronics. I developed a keen interest in conducting research within laboratory environments throughout my coursework. Subsequently, during my two years of graduate studies, I actively engaged in a research laboratory primarily dedicated to machine learning in the fields of positioning, navigation, robotics, and sensor fusion. This commitment resulted in the development of an integrated real-time positioning system and the presentation of several research papers, some of which are currently under review, while others are being revised for submission in Q1. I am highly motivated to elevate my academic standing in the specialized field and seek a Ph.D. program under the guidance of an expert in a reputable laboratory and university.

EDUCATION

- **Master of Science in Electrical Engineering (Digital Electronic systems)** Sep 2021 - Present
- Iran University of Science and Technology (IUST) Tehran, Iran

  Thesis: GPS/INS/Image Integrated Navigation System for Autonomous Vehicle and Robot Positioning with Factor Graph and AI models.
  Advisor: Prof. M. R. Mosavi (Website)

- **Bachelor of Science in Electrical Engineering (Electronic)** Sep 2017 – Jun 2021
- Tabriz University Tabriz, Iran
- **Thesis:** Building an ECG Device with an ARM Microcontroller and Displaying it Online on a Smartphone Wirelessly

TEACHING AND RESEARCH EXPERIENCE

- Research Assistant at the Iran University of Science and Technology (Dr. M. R. Mosvi)
- Teacher Assistant for designing Intelligent Systems
- Academic advisor for pre-university students

RESEARCH INTERESTS

- Robotic
- Navigation
- Autonomous Vehicle
- Machine Learning
- Sensor Fusion
- Computer Vision
- Motion Planning
- Artificial Intelligence
- Deep Learning
- UAV

FUNDING & AWARDS

- Merit-based admission from the Talented Student Office of Tehran University for graduate study 2021
- Merit-based admission from the Talented Student Office of Iran University of Science and Technology University for graduate study. 2021
- Awarded financial support from Iran Ministry of Science, Research, and Technology for MSc thesis Research. 2022
- Successfully secured admission to state-funded universities for both Bachelor's and Master's degree programs. 2017 & 2021

- Top 10% of B.Sc. Electrical Engineering students graduated among more than 150 students. 2021
- The selected team of the national technological event for the development of artificial intelligence in the aerospace sector. 2023

Academic projects and experiences

- Image/INS integrated navigation system based on Factor Graph and Intelligence**.**
- GNSS/Image/INS integrated navigation system based on Factor Graph and Intelligence methods.
- Building an ECG device with an ARM microcontroller and displaying it online on a smartphone wirelessly.
- Implementation of the GNSS/Image/INS navigation system on the Jetson board in the project: Navigation of autonomous vehicles.

SKILLS &LANGUAGES

- **Software:** Linux, ROS, Anaconda, jupyter, ….
- **Programming framework:** Python, C++, C, OpenCv, Matlab, …
- **Hardware:** Different Madule and Sensors(pressure sensor, Gas Leak Detector, IR, Temperature, ECG, IMU, GPS, LCD, …), Jetson Board, Raspberry Pi Board, ARM Microcontroller, AVR Microcontroller.
- **Soft Skills:** Strong communication skills, Proven ability to work collaboratively in a team setting, Effective time management skills, Creative problem solver with the ability to identify and address complex issues through innovative solutions, Demonstrated adaptability and resilience in rapidly changing work environments, Excellent interpersonal skills
- **Languages:** English, Turkish (native), Persian (native)

PUBLICATIONS

- **M. Mahdi. Karimi**, M. R. Mosavi, Sina Taghizadeh, and Ebrahim Shafiee, "Integrated VIO Positioning System Based on Nonlinear Factor Graph Optimization," Information and Communication Technology in Policing, 2023.

EXTRACURRICULAR ACTIVITIES

- ping pong
- football
- fiction writing

REFERENCES

- **Prof. M. R. Mosavi,** Professor, Department of Electrical Engineering, Digital Electronics Systems Branch, Iran University of Science and Technology, Narmak, Tehran 16846-13114, Iran.
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