Reza Behbahani Nejad

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Education

M.Sc. in Mechatronics Engineering *Oct 2021 – Present*
Khajeh Nasir Toosi University of Technology, Tehran, Iran GPA: 4/4 (19.31/20)
Attention Evaluation of Driver for Environmental Advertisements using Deep Learning Methods
Supervisor: Dr. Ali Nahvi, Dr. Esmaeil Najafi

B.Sc. in Mechanical Engineering *Oct 2016 – Jan 2021*
Amirkabir University of Technology (Tehran Polytechnique), Tehran, Iran GPA: 3.19/4 (15.78/20)
Design and Fabrication of an Inflatable Soft Robot for Ankle Rehabilitation
Supervisor: Dr. Mohammad Zareinejad, Dr. Hamed Ghafarirad

Research Projects and Publications

Journal Articles

2023 **Nejad, R. B.**, Komijani, A. H., & Najafi, E. (2023). Intelligent Cervical Spine Fracture Detection Using Deep Learning Methods. *arXiv preprint arXiv:2311.05708,Under Review in Medical Engineering & Physics Journal*

2023 **Nejad, R. B.**, Nikanfar, S., Khoramdel, J., & Najafi, E. "IoT-based Intelligent Monitoring System for Driving Safety Enhancement", *Under Review in Control and Cybernetics Journal*

Conference Proceedings

2023 Gharibkhanian, A., **Nejad, R. B.**, Ghafarirad, H., & Zareinejad, M. (2023). Design and Fabrication of an Inflatable Soft Robot for Enhancing Foot Drop Rehabilitation. *2023 11th RSI International Conference on Robotics and Mechatronics (ICRoM)*, Tehran, Iran, Islamic Republic of, (Accepted for presentation)

2023 Hosni, M. M., **Nejad, R. B.**, & Najafi, E. (2023). IoT-based Intelligent Detection System for Pedestrian Safety Enhancement. *7th International Conference on Internet of Things and Applications (IoT) (pp. Pending). IEEE. (Pending publication)*

2022 **Nejad, R. B.**, Khoramdel, J., Ghanbarzadeh, A., Sharbatdar, M., & Najafi, E. (2022, November). A Multiclass Retinal Diseases Classification Algorithm using Deep Learning Methods.*2022 10th RSI International Conference on Robotics and Mechatronics (ICRoM)*, Tehran, Iran, Islamic Republic of, 2022, pp. 365-370, doi: 10.1109/ICRoM57054.2022.10025206.

Teaching Assistance

Graduate Courses

Artificial Intelligence and Expert Systems: Lectured on the topics Fuzzy logic (MATLAB), Artificial Neural Networks and Reinforcement learning (Python). Assisted with homework and final project evaluation. Under the supervision of Dr. E. Najafi (Faculty of mechatronics engineering)

Mechanical Engineering Design: Prerequisite course for mechatronics students coming from an electrical bachelors degree

Undergraduate Courses

Introduction to Computer Vision: Lectured on the topics Linear regression, Classic methods in image processing using Open CV, CNN, Object Detection and Segmentation in Python and Tensorflow. Assisted with homework and final project evaluation. Under the supervision of Dr. E. Najafi (Faculty of mechanical engineering)

Neural Networks: Lectured on the topics Linear regression, MLP, CNN, RNN and Object detection in Python. Assisted with homework and final project evaluation. Under the supervision of Dr. E. Najafi (Faculty of mechanical engineering)

Mechanical Engineering Design I: Lectured in the topics Static load, Dynamic load, shaft and joint design.Assisted with homework and final project evaluation. Under the supervision of Dr. E. Najafi (Faculty of mechanical engineering)

Control and Measurement systems: Lectured on the topics Sensors, Actuator, Arduino. Assisted with homework and final project evaluation. Under the supervision of Dr. A. Nahvi (Faculty of mechanical engineering)

Work Experience

Nasir Driving Simulator Company, Tehran, Iran *Jan 2022 – Present*
Part-time Engineer

- Designed and implemented driver training simulators and dump truck cabin simulators.
- Contributed to the development of driving monitoring systems as a team member.

Software: Solidworks, Python

Skills

Programming: Python, MATLAB, C++

Technologies: Arduino, MATLAB & Simulink, Unreal Engine, Raspberry Pi, Solidworks

Applications: LaTeX, Microsoft Office, Adobe Illustrator

Languages: Persian (Native), English (Professional working proficiency), Arabic (Limited working proficiency)

References

Dr. Esmaeil Najafi ✉ Enschede, Netherlands
Associate Professor in Cognition and AI
Saxion University of Applied Sciences
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Dr. Ali Nahvi ✉ Tehran, Iran
Associate Professor in Mechanical Engineering
K. N. Toosi University of Technology
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Dr. Mohammad Zareinejad ✉ Tehran, Iran
Associate Professor in Mechanical Engineering
Amirkabir University of Technology (Tehran Polytechnic)
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