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Yazdan Ghanavati

Email
Portfolio
LinkedIn

Education

M.Sc. in ICT for Internet and Multimedia — **University of Padua** — **Sept 2024 - Present**
B.Sc. in Biomedical Engineering — **University of Isfahan** — **Sept 2018 – Jan 2023**

Work Experiences

Teaching Assistant — **Microprocessor's Course** — **Fall 2021, 2022**

- Supported 129 Biomedical Engineering students across two semesters, dedicating 80+ hours to teaching and mentorship.
- Conducted problem-solving sessions, designed practical homework, and guided students in developing **AVR-based** robotics.
- Contributed to fostering technical proficiency, with 6 graduates pursuing studies or careers in robotics and embedded systems.

Internship Supervisor — **Entertainment innovation center of Isfahan university** — **Jun 2022 – Sept 2022**

- Supervised a team of 9 interns in designing and implementing serious games, ensuring the use of innovative vision techniques.
- Executed workshops on **OpenCV**, **Mediapipe**, and **Unity** game engine, focusing on kinematic analysis and real-time integration.
- Inspired 5 interns to align their capstone projects with **telemedicine** applications, expanding the scope of their academic work.

Computer Vision Intern — **Entertainment innovation center of Isfahan university** — **Jun 2021 – Mar 2022**

- Developed an application, "**Human Pose Tracking Package**," enabling control of exergames through kinematic movements.
- Introduced a novel approach for individuals with mobility challenges, promoting accessible and engaging exercise options.
- Presented the project's findings in my first conference paper at **CGCO 2022**, highlighting its innovative contributions to the field.

Extra Curriculars

Research Assistant — **University of Isfahan, BME Department** — **Jun 2021 – Sept 2023**

- Directed research on human pose tracking in **exergames** and rehabilitation, advancing computer vision applications in **healthcare**.
- Supported patent preparation, academic paper publication, and software development, delivering impactful contributions.
- Delivered talks, presentations, and workshops, fostering collaboration and knowledge-sharing within the field.

Lead Researcher/Presenter — **Online Panel of Exergames** — **Dec 2021**

- Led research on computer vision applications in rehabilitation, focusing on tracking body landmarks using **Python** and Mediapipe.
- Collaborated with officials and scientific teams to organize and contribute to the event, ensuring a robust academic discussion.
- Presented findings at the panel for 52 academic peer, highlighting the role of exergames in advancing rehabilitation technologies.

Personal Projects

Behneshan(2023). An AI-powered platformer educational game based on **LSTM** neural networks and **action recognition** techniques to teach **Persian Sign Language**, achieving 96% accuracy in recognizing 29 letters and practical words.

ThermoDetect(2022). A breast cancer detection system built using advanced **image-processing** techniques and **machine learning** algorithms in **MATLAB**, incorporating thermogram analysis to provide accurate and efficient diagnosis of potential abnormalities.

DyslexiaAid(2020). A **C#-based** application designed to assist children in improving their reading and learning abilities through engaging, interactive exercises tailored to enhance cognitive skills and reading comprehension.

Skills/Test Scores

- **Programming Languages** Python, C#, C++, MATLAB, SQL, R
- **Soft Skills** Mentorship, Teamwork, Strategic Planning, Project Management, Problem Solving
- **Software** Git, EndNote, SPSS, Tableau, Altium Designer, Proteus, Simulink, Figma
- **Test Scores** GRE(Overall Score: 311, Quant:168, Verbal:143), IELTS(Overall Score: 7)

Awards

Meritorious Paper Award — **6th International Serious Games Symposium** — **Jan 2024**
Won the prestigious award for advancing educational technology through innovative research paper in computer vision and AI.

Biomedical Engineering Graduation — **University of Isfahan, BME Department** — **Jan 2023**
Ranked within the top 10% among BME students in the same entrance (N=70)