Arya Parvizi

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Born on August 7th 1998 in Shiraz, Gender: Male, Marital status: Single

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Work Experience

Concealand Game Studio *Tehran, Iran*

GAME DEVELOPER INTERN *February 2023 - April 2023*

Procedural Content Generator (Procedural Animation for a Humanoid Character).
Worked with Unity3D IK frameworks and animation rigging package.
Getting familiar with Unity ML model training system.

Researched the applications of Reinforcement Learning, Imitiation Learning, Curriculum Learning in the humanoid animation of Computer Graphics and Robotics subjects.

NAO Research and Development Group *Tehran, Iran*

ROBOTICS ENGINEER INTERN *July 2021 - September 2021*

Responsible for Robot motion and A.I.
The project was implementing an autonomous control system for SBU omni-directional robot. Applied Localization and Mapping algorithms using ROS2 slam libraries with LIDAR sensors.
Applied Maze Solving, Obstacle avoidance, and Navigation algorithms using Python3.
Fixing the 3D Model in Webots which was causing a dynamic motion failure and getting familiar with robot 3D models, URDF and Proto, and the SBU omni-robot structure in Webots.

Setting Up the ROS2 platform for the robot and getting familiar with the ROS2 networking protocols and architectures.

Education

Master of Computer Science *Fredericton, NB, Canada*

UNIVERSITY OF NEW BRUNSWICK *2023 - Present*

GPA: 3.9/4.3

Bachelor of Computer Engineering *Tehran, Iran*

SHAHID BEHESHTI UNIVERSITY *2017 - 2022*

GPA: 3.09/4 (15.48/20), GPA last two years: 3.07/4 (15.36/20)

Skills

- **Programming Languages** : Python, Java
- **Frameworks and libraries** : Keras/Tensorflow, OpenCV, Scikit-learn, Seaborn, Pandas, Node.JS, React
- **Databases** : PostgreSQL
- **Engines and Simulators** : Webots Simulator, Unity Game Engine, Robocup Soccer Simulator, Gazebo Robot Simulator, OpenAI Gym
- **Industry knowledge** : Computer Vision, Image Processing, Machine Learning, Reinforcement Learning
- **Operating Systems** : Windows, MacOS, Ubuntu, Raspbian
- **Miscellaneous** : Robot Operating System(ROS), GIT, LaTeX, Microsoft Office

Languages

- **English** : Fluent (IELTS scores: Listening: 8, Reading: 9, Writing: 6.5, Speaking: 7, Overall Bandscore: 7.5)

Educational Experience

• **Research Assistant**

Human-Robot Interaction Laboratory, Computer Science and Engineering Faculty — *September 2023 - Present*

Under Supervision of Professor Daniel Rea

• **Laboratory Member (Researcher, Co-Manager)**

Robotics Laboratory, Computer Science and Engineering Faculty — *Summer 2021 - Present*

Under Supervision of Professor Armin Salimi-Badr

• **Teaching Assistant**

Introduction to Algorithms Design — *Fall 2022*

Instructed by Professor Ramak Ghavamizadeh

• **Instructor**

Introduction to Robotics — *Summer 2022*

Robotics Laboratory, Computer Science and Engineering Faculty

• **Teaching Assistant**

Digital Logic Circuits — *Spring 2019*

Instructed by Professor Hamidreza Mahdiani

Publications

Generating Hand-Written Symbols With Trajectory Planning Using A Robotic Arm

2023 13th International Conference on Computer and Knowledge Engineering (ICCKE) — *27 Nov 2023*

[more info]

Projects (Chronological Order)

Learning Hand-Written Digit Patterns Using Robotic Arms (Bachelor Thesis Project)

Supervisor: Professor Armin Salimi-Badr / Referee: Professor Yaser Shekofteh — *Summer 2022*

[more info]

Heater/Cooler Control System (Course Project)

Embedded And Real Time Systems Instructed By Professor Seyed-Hosein Attarzadeh-Niaki — *Fall 2021*

Classification of Different Car Brand Models (Course Project)

Fundamentals Of Computational Intelligence Instructed By Professor Hamed Malek — *Fall 2021*

Simple Bitcoin Estimator Using Regression (Course Project)

Fundamentals Of Computational Intelligence Instructed By Professor Hamed Malek — *Fall 2021*

Survivability Likelihood of Titanic Passengers Data Analysis (Course Project)

Fundamentals Of Computational Intelligence Instructed By Professor Hamed Malek — *Fall 2021*

E-Puck Robot Wall Following and Obstacle Avoidance (Course Project)

Principles of Robotics Instructed By Professor Armin Salimi-Badr — *Spring 2021*

Analysis and Optimization of the Shazam Algorithm (Course Project)

Matlab Programming Workshop Instructed By Professor Yaser Shekofteh — *Fall 2020*

A Clone of Skype's Background Blurring on Webcams (Course Project)

Computer Vision Instructed By Professor Alireza Talebpour — *Fall 2020*

An Implementation of Decaf Compiler (Course Project)

Compiler Design Instructed By Professor Mohammad Reza Bahrami — *Fall 2020*

Automated Scheduling and Course Selection for Students (Course Project)

Artificial Intelligence Instructed By Professor Mehrnoush Shamsfard — *Fall 2019*

Eight Puzzle Platform and Solver (Course Project)

Artificial Intelligence Instructed By Professor Mehrnoush Shamsfard — *Fall 2019*

Honors and Awards

RoboCup IranOpen2023 International Competitions, Soccer 2D Simulation League

Ranked 3rd - as a Member of R3CESBU Team — *Spring - 2023*

The Best Bachelor Thesis Project

Nominee — *Summer - 2022*

ROBOIUT2021, Webots' Line Follower league, Isfahan university of technology

Ranked 1st — *Fall - 2021*