Arya Parvizi
Software Developer

Passionate software developer specializing in Robotics, Human-Robot Interaction, Machine Learning, Computer Vision and Image Processing. Keen interest in pursuing cognition development in robots. Also an astrophysics, quantum physics and classical mechanics enthusiast.

Contact

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in arya-parvizi

ph504

🌐 arya_portfolio

Education

Master of Computer Science
UNB, Fredericton, Canada
Sept 2023 - Present

Bachelor of Computer Engg.
Shahid Beheshti University, Tehran, Iran
2017-2022

Skills

- **Languages**: Python, C++, Java
- **Frameworks**: Keras, OpenCV, Scikit-learn, Seaborn, Pandas
- **DBMS** : MySQL, PostgreSQL
- **Engines and Simulators** : Webots Simulator, Unity Game Engine, Robocup Soccer Simulator, Gazebo Robot Simulator, OpenAI Gym
- **OS** : Windows, MacOS, Ubuntu, Raspbian
- **Miscellaneous**: Robot Operating System(ROS), GIT

Work Experience

February 2023 - April 2023
Concealand Game Studio, Tehran, Iran
Game Developer Intern
- 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 applications Reinforcement Learning, Imitation Learning, Curriculum Learning in humanoid animation

July 2021 - September 2021
NAO Research and Development Group, Tehran, Iran
Robotics Engineer Intern
- Responsible for Robot motion and AI
- Implementing 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 3D Model in Webots and getting familiar with robot 3D models, URDF and Proto

Educational Experience

September 2023 - Present
HRI LABORATORY, CS AND ENGINEERING FACULTY
Graduate Research Assistant
Under Supervision of Professor Daniel Rea

Winter 2024
INTRODUCTION TO GAME DEVELOPMENT
Teaching Assistant

Honors and Awards

RoboCup IranOpen2023 International Competitions, Soccer 2D Simulation League

3rd Place - R3CESBU TEAM

Spring 2023

The Best Bachelor Thesis Project

Nominee

Summer 2022

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

1st Place

Fall 2021

Publications

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

2023 13th International Conference on Computer and Knowledge Engineering (ICCKE)

November 2023

Languages

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

Summer 2021 - Present
ROBOTICS LABORATORY, CS AND ENGINEERING FACULTY
Laboratory Member (Researcher, Co-Manager)

Fall 2022
INTRODUCTION TO ALGORITHMS DESIGN
Teaching Assistant

Summer 2022
INTRODUCTION TO ROBOTICS
Instructor

Spring 2019
DIGITAL LOGIC CIRCUITS
Teaching Assistant

Projects

Winter 2024
PROJECTS
- Impacts of Integrating Empathy into Tele-operations (Course)
- Overcoming Phobias Through Virtual Reality Exposure (Hobby Project)
- Implementation and Analysis of Binary Index Trees for Historical Blockchain Databases (Course)

Fall 2023
COURSE PROJECTS
- Comparing Relative Aim Control Schemes with Mouse and Controller with Aim Assistance Techniques And Gyrosensor
- Implementation of Encoder-Decoder LSTM Network Towards Synthetic Summarized Titles From Indian News Reports
- Likelihood Calculation for Student Success Based on Preprepared Dataset

Summer 2022
BACHELOR THESIS PROJECT
Learning Hand-Written Digit Patterns Using Robotic Arms

Fall 2021
COURSE PROJECTS
- Heater/Cooler Control System
- Classification of Different Car Brand Models
- Simple Bitcoin Estimator Using Regression
- Survivability Likelihood of Titanic Passengers Data Analysis

Spring 2021
COURSE PROJECTS
- E-Puck Robot Wall Following and Obstacle Avoidance

Fall 2020
COURSE PROJECTS
- Analysis and Optimization of the Shazam Algorithm
- A Clone of Skype's Background Blurring on Webcams
- An Implementation of Decaf Compiler

Fall 2019
COURSE PROJECTS
- Automated Scheduling and Course Selection for Students
- Eight Puzzle Platform and Solver