

# Arya Parvizi

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

+1 506 429 6990 | [aryaparvizi98@gmail.com](mailto:aryaparvizi98@gmail.com) | [ph504.github.io](https://ph504.github.io) | [ph504](https://ph504) | [arya-parvizi](https://arya-parvizi)

## 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)

## 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, Imitation 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.

## Honors and Awards

### RoboCup 2024 International Competitions, Soccer 2D Simulation League

RANKED 5TH - AS A MEMBER OF R2D2 TEAM

Summer - 2024

### Scholarship from School of Graduate Studies, University of New Brunswick

BOARD OF GOVERNORS MERIT AWARDS FOR GRADUATE STUDIES

Fall - 2023

### 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

### Konkour, National University Entrance Exam

TUITION WAIVED ADMISSION TO SHAHID BEHESHTI UNIVERSITY - RANKED TOP 4%

Fall - 2017

## Skills

**Languages** : Python, C/C++, Javascript, **Frameworks** : Keras/Tensorflow, Node.JS, React, OpenCV, PyTorch, **Databases** : SQL, PostgreSQL, Pandas, Redis **Simulators** : Webots Simulator, Unity Game Engine, Robocup Soccer Simulator, Gazebo Robot Simulator, OpenAI Gym, **Knowledge** : Computer Vision, Image Processing, Signal Processing, ML, ANNs, Reinforcement Learning, SLAM (Simultaneous Localization and Mapping), Planning, Optimal Control, Evolutionary Algorithms **Operating Systems** : Windows, Ubuntu, Raspbian **MISC.** : Robot Operating System(ROS), GIT, Docker, CUDA

## Languages

• **Persian** : Native

• **Japanese** : Intermediate

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

<b>Publications</b>		
<b>Generating Hand-Written Symbols With Trajectory Planning Using A Robotic Arm</b>		
<a href="#">[more info]</a>		
2023 13TH INTERNATIONAL CONFERENCE ON COMPUTER AND KNOWLEDGE ENGINEERING (ICCKE)		27 Nov 2023
<b>Academic Experience</b>		
<b>Research Assistant</b>		
HUMAN-ROBOT INTERACTION LABORATORY   UNIVERSITY OF NEW BRUNSWICK		September 2023 - Present
Supervisor: Daniel J. Rea		
<b>Laboratory Member (Researcher, Co-Manager)</b>		
ROBOTICS LABORATORY   SHAHID BEHESHTI UNIVERSITY		Summer 2021 - Present
Supervisor: Armin Salimi-Badr		
<b>Teaching Assistant</b>		
INTRODUCTION TO GAME DEVELOPEMENT   UNIVERSITY OF NEW BRUNSWICK		Winter 2024
Instructor: Daniel J. Rea		
<b>Teaching Assistant</b>		
INTRODUCTION TO ALGORITHMS DESIGN   SHAHID BEHESHTI UNIVERSITY		Fall 2022
Instructor: Ramak Ghavamizadeh		
<b>Instructor</b>		
INTRODUCTION TO ROBOTICS		Summer 2022
Robotics Laboratory, Computer Science and Engineering Faculty		
<b>Teaching Assistant</b>		
DIGITAL LOGIC CIRCUITS		Spring 2019
Instructed by Professor Hamidreza Mahdiani		
<b>Projects (Chronological Order)</b>		
<b>Avatar Robots to Mitigate Social Biases</b>		
RESEARCH PROJECT   PROFESSOR DANIEL J. REA		Summer 2024
<b>Inducing Empathy, A Method of Integrating Social Interfaces to Teleoperation</b>		
<a href="#">[more info]</a>		
MASTER THESIS   SUPERVISOR: PROFESSOR DANIEL J. REA		Winter 2024
<b>Overcoming Phobias Through Virtual Reality Exposure</b>		
HOBBY PROJECT		Winter 2024
<b>Implementation and Analysis of Binary Index Trees for Historical Blockchain Databases</b>		
<a href="#">[more info]</a>		
BIG DATA SYSTEMS   PROFESSOR SUPRIO RAY		Winter 2024
<b>Comparing Relative Aim Control Schemes with Mouse and Controller with Aim Assistance Techniques And Gyrosensor</b>		
HUMAN-CENTERED INTERFACE DESIGN   PROFESSOR DANIEL J. REA		Fall 2023
<b>Implementation of Encoder-Decoder LSTM Network Towards Synthetic Summarized Titles From Indian News Reports</b>		
NATURAL LANGUAGES PROCESSING   PROFESSOR PAUL COOK		Fall 2023
<b>Likelihood Calculation for Student Success Based on Preprepared Dataset</b>		
MACHINE LEARNING AND DATA MINING   PROFESSOR FRANCIS PALMA		Fall 2023
<b>Learning Hand-Written Digit Patterns Using Robotic Arms (Bachelor Thesis Project)</b>		
<a href="#">[more info]</a>		
SUPERVISOR: PROFESSOR ARMIN SALIMI-BADR / REFEREE: PROFESSOR YASER SHEKOFTEH		Summer 2022
<b>Heater/Cooler Control System (Course Project)</b>		
EMBEDDED AND REAL-TIME SYSTEMS   PROFESSOR SEYED-HOSEIN ATTARZADEH-NIAKI		Fall 2021
<b>Classification of Different Car Brand Models (Course Project)</b>		
FUNDAMENTALS OF COMPUTATIONAL INTELLIGENCE   PROFESSOR HAMED MALEK		Fall 2021
<b>Simple Bitcoin Estimator Using Regression (Course Project)</b>		
FUNDAMENTALS OF COMPUTATIONAL INTELLIGENCE   PROFESSOR HAMED MALEK		Fall 2021
<b>Survivability Likelihood of Titanic Passengers Data Analysis (Course Project)</b>		
FUNDAMENTALS OF COMPUTATIONAL INTELLIGENCE   PROFESSOR HAMED MALEK		Fall 2021
<b>E-Puck Robot Wall Following and Obstacle Avoidance (Course Project)</b>		
PRINCIPLES OF ROBOTICS   PROFESSOR ARMIN SALIMI-BADR		Spring 2021
<b>Analysis and Optimization of the Shazam Algorithm (Course Project)</b>		
MATLAB PROGRAMMING WORKSHOP   PROFESSOR YASER SHEKOFTEH		Fall 2020
<b>A Clone of Skype's Background Blurring on Webcams (Course Project)</b>		
COMPUTER VISION   PROFESSOR ALIREZA TALEBPOUR		Fall 2020

## **An Implementation of Decaf Compiler (Course Project)**

COMPILER DESIGN PROFESSOR MOHAMMAD REZA BAHRAMI

*Fall 2020*

## **Automated Scheduling and Course Selection for Students (Course Project)**

ARTIFICIAL INTELLIGENCE PROFESSOR MEHRNOUSH SHAMSFARD

*Fall 2019*

## **Eight Puzzle Platform and Solver (Course Project)**

ARTIFICIAL INTELLIGENCE PROFESSOR MEHRNOUSH SHAMSFARD

*Fall 2019*

## **References**

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### **Professor Daniel J. Rea**

ASSISTANT PROFESSOR, UNIVERSITY OF NEW BRUNSWICK

- Email: [daniel.rea@unb.ca](mailto:daniel.rea@unb.ca)

### **Professor Armin Salimi-Badr**

ASSISTANT PROFESSOR, SHAHID BEHESHTI UNIVERSITY

- Email: [a\\_salimibadr@sbu.ac.ir](mailto:a_salimibadr@sbu.ac.ir)