

# Arya Parvizi

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## Education

**Master of Computer Science**  
**UNIVERSITY OF NEW BRUNSWICK**

Fredericton, NB, Canada

**Bachelor of Computer Engineering**  
**SHAHID BEHESHTI UNIVERSITY**

Tehran, Iran

## Work Experience

**Concealand Game Studio**  
**GAME DEVELOPER INTERN**

Tehran, Iran

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**  
**ROBOTICS ENGINEER INTERN**

Tehran, Iran

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

• **English** : Fluent

• **Persian** : Native

• **Japanese** : Intermediate

**Publications** 

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

[\[more info\]](#)

2023 13TH INTERNATIONAL CONFERENCE ON COMPUTER AND KNOWLEDGE ENGINEERING (ICCKE) 27 Nov 2023

**Academic Experience** 

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**Research Assistant**

HUMAN-ROBOT INTERACTION LABORATORY UNIVERSITY OF NEW BRUNSWICK September 2023 - Present

Supervisor: Daniel J. Rea

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

ROBOTICS LABORATORY SHAHID BEHESHTI UNIVERSITY Summer 2021 - Present

Supervisor: Armin Salimi-Badr

**Teaching Assistant**

INTRODUCTION TO GAME DEVELOPEMENT UNIVERSITY OF NEW BRUNSWICK Winter 2024

Instructor: Daniel J. Rea

**Teaching Assistant**

INTRODUCTION TO ALGORITHMS DESIGN SHAHID BEHESHTI UNIVERSITY Fall 2022

Instructor: 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

**Projects (Chronological Order)** 

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**Avatar Robots to Mitigate Social Biases**

RESEARCH PROJECT PROFESSOR DANIEL J. REA Summer 2024

**Inducing Empathy, A Method of Integrating Social Interfaces to Teleoperation**

[\[more info\]](#)

MASTER THESIS SUPERVISOR: PROFESSOR DANIEL J. REA Winter 2024

**Overcoming Phobias Through Virtual Reality Exposure**

HOBBY PROJECT Winter 2024

**Implementation and Analysis of Binary Index Trees for Historical Blockchain**

**Databases** [\[more info\]](#)

BIG DATA SYSTEMS PROFESSOR SUPRIO RAY Winter 2024

**Comparing Relative Aim Control Schemes with Mouse and Controller with Aim**

**Assistance Techniques And Gyrosensor**

HUMAN-CENTERED INTERFACE DESIGN PROFESSOR DANIEL J. REA Fall 2023

**Implementation of Encoder-Decoder LSTM Network Towards Synthetic**

**Summarized Titles From Indian News Reports**

NATURAL LANGUAGES PROCESSING PROFESSOR PAUL COOK Fall 2023

**Likelihood Calculation for Student Success Based on Preprepared Dataset**

MACHINE LEARNING AND DATA MINING PROFESSOR FRANCIS PALMA Fall 2023

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

**Project)** [\[more info\]](#)

SUPERVISOR: PROFESSOR ARMIN SALIMI-BADR / REFEREE: PROFESSOR YASER SHEKOFTEH Summer 2022

**Heater/Cooler Control System (Course Project)**

EMBEDDED AND REAL-TIME SYSTEMS PROFESSOR SEYED-HOSEIN ATTARZADEH-NIAKI Fall 2021

**Classification of Different Car Brand Models (Course Project)**

FUNDAMENTALS OF COMPUTATIONAL INTELLIGENCE PROFESSOR HAMED MALEK Fall 2021

**Simple Bitcoin Estimator Using Regression (Course Project)**

FUNDAMENTALS OF COMPUTATIONAL INTELLIGENCE PROFESSOR HAMED MALEK Fall 2021

**Survivability Likelihood of Titanic Passengers Data Analysis (Course Project)**

FUNDAMENTALS OF COMPUTATIONAL INTELLIGENCE PROFESSOR HAMED MALEK Fall 2021

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

PRINCIPLES OF ROBOTICS PROFESSOR ARMIN SALIMI-BADR Spring 2021

**Analysis and Optimization of the Shazam Algorithm (Course Project)**

MATLAB PROGRAMMING WORKSHOP PROFESSOR YASER SHEKOFTEH Fall 2020

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

COMPUTER VISION PROFESSOR ALIREZA TALEBPOUR Fall 2020

<b>An Implementation of Decaf Compiler (Course Project)</b>	
COMPILER DESIGN   PROFESSOR MOHAMMAD REZA BAHRAMI	<i>Fall 2020</i>
<b>Automated Scheduling and Course Selection for Students (Course Project)</b>	
ARTIFICIAL INTELLIGENCE   PROFESSOR MEHRNOUSH SHAMSFARD	<i>Fall 2019</i>
<b>Eight Puzzle Platform and Solver (Course Project)</b>	
ARTIFICIAL INTELLIGENCE   PROFESSOR MEHRNOUSH SHAMSFARD	<i>Fall 2019</i>

**References** 

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**Available upon request**