

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

Experience

RESEARCH ASSISTANT

HUMAN-ROBOT INTERACTION LABORATORY — UNIVERSITY OF NEW BRUNSWICK

UNB, Fredericton, Canada

September 2023 - Present (2 years)

Selected Links: [\[org\]](#) [\[github\]](#)

- Designed teleoperation UIs with ROS + Python (Tkinter) using an MVC architecture; framed operator controls as “player” inputs with responsive feedback loops for a game-like feel.
- Gamified the robot experience with a social, friendly avatar layer and a maze-style task flow to encourage engagement, clarity of goals, and measurable progression.
- Engineered seamless “session” stability—automated recovery for routing/DNS/ROS master issues so interactions felt continuous (no immersion-breaking drops).
- Modernized a legacy codebase (readability, modularity, docs) and ran UX-focused studies to iterate on difficulty tuning, guidance, and social presence in teleoperation.

GAME DEVELOPER INTERN

CONCEALAND GAME STUDIO

Tehran, Iran

January - August 2023

- Applied Reinforcement Learning for Procedural Animation of a humanoid character to significantly reduce the animation state complexity and workload for artists.
- Worked with Unity IK frameworks, animation rigging package, and ML model training

TEAM LEAD

ROBOTICS LABORATORY — SHAHID BEHESHTI UNIVERSITY

SBU, Tehran, Iran

September 2021 - August 2023 (2 years)

Selected Links: [\[org\]](#)

- Led a 9-member interdisciplinary team bridging hardware and AI through TCP-based networking, developing intelligent agents for both simulated and real robotic systems (RoboCup 2D, quadcopter, SBU omni-robot, and Humanoid NAO).
- Secured a sponsorship grant from Divar to support competition and lab activities.
- Managed Git workflows, code reviews, and technical design across multiple game-like simulation environments.
- Integrated and packaged modules for intelligent-system compatibility; ensured cohesive builds and cross-team integration.
- Built and maintained a semi-manual CI/CD-style validation pipeline, performing statistical analyses on sparse datasets to generate actionable QA reports.

Teaching

TEACHING ASSISTANT

ALGORITHMS DESIGN AND ANALYSIS

UNB, Fredericton, Canada

Winter 2025

- Instructor: Huajie Zhang; Responsible for marking and reviewing assignments

TEACHING ASSISTANT

INTRODUCTION TO GAME DEVELOPMENT

UNB, Fredericton, Canada

Winter 2024

- Instructor: Daniel Rea; Responsible for marking and reviewing assignments, as well as tutorial outline with Godot Engine.

INSTRUCTOR

INTRODUCTION TO ROBOTICS

SBU, Tehran, Iran

Summers 2022 & 2023

- Instructed summer workshops to recruit and train new lab members.
- Taught Fundamentals of Robotics, Machine Learning, AI Algorithms, and Simulation concepts, using C++ and Python

Honors and Awards

RoboCup 2024 International Competitions, Soccer Simulation 2D 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

Granted Facilities from the National Elites Foundation, Iran

AS A WINNER OF AN ELITE COMPETITIVE EVENT (ROBOCUP IRANOPEN2023)

Summer - 2024

RoboCup IranOpen2023 International Competitions, Soccer Simulation 2D League

RANKED 3RD — AS A MEMBER OF R3CESBU TEAM

Spring - 2023

Skills

- **Languages** : Python, C#, C/C++, Javascript, Java
- **Frameworks** : Node.JS, React, Bootstrap, PyTorch, TensorFlow
- **Databases** : MySQL, PostgreSQL, Apache Hive, Apache Hadoop
- **Misc.** : Unity, Animation, Rigging, Godot, GPU Programming, GIT, Docker

Languages

- **English** : Fluent (IELTS 7.5)
- **Persian** : Native
- **Japanese** : Intermediate

Publications

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

R3CESBU Soccer Simulation 2D Team Description Paper 2023 [\[more info\]](#)

TEAM DESCRIPTION PAPER FOR ROBOCUP 2023

27 Nov 2023

Independent Projects

- [\[itch.io\]](#) • Dummy Paradox — GMTK 2025 GameJam Prototype (Themed Loop)
- A Serious VR Game to Overcome Arachnophobia, Using Unity and MetaQuest3
- [\[github\]](#) • A Clone of Feed and Grow Game, A Platform to train NEAT Algorithm Using Unity C#
- A Clone of Hollow Knight Game, Using Unity
- A Clone of Stick Hero Game, Using C++ SDL Library
- Spaceship Adventure Game, Using Unity C#

Curricular Projects

- [\[github\]](#) • Implementation and Analysis of Binary Index Trees for Historical Blockchain Databases, Using Java
- [\[github\]](#) • Comparing Relative Aim Control Schemes with Aim Assistance Techniques and GyroSensor, Using Unity C#
- [\[github\]](#) • A Complete Implementation of Decaf Compiler, Using Java
- [\[github\]](#) • Eight Puzzle Game and AI Solver Using BFS, DFS, A*, and IDA*, Using Java
- [\[github\]](#) • Multi-player Chess Game Clone Platform Using JavaFX
- A Clone of Doodle Jump Using C++ SDL Library

References

Available upon request