

Sepehr Lavasani

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EDUCATION	<ul style="list-style-type: none">◇ University of Alberta, Edmonton, Canada M.Sc. in Computing Science Working with Prof. Nathan Sturtevant on Suboptimal Bidirectional Search◇ Shahid Beheshti University, Tehran, Iran B.Sc. in Computer Engineering, Major: Computer Architecture Cumulative GPA: 3.71/4 Last two years GPA: 3.85/4	2021 - Present 2015 - 2020
INTERESTS	<ul style="list-style-type: none">◇ AI in Games◇ Video Game Programming◇ Video Game Design◇ Serious Game and GWAP(Game With a Purpose)	
MASTER'S THESIS	<ul style="list-style-type: none">◇ Suboptimal Bidirectional Heuristic Search Under the supervision of Nathan Sturtevant.<ul style="list-style-type: none">• Designed an unbounded suboptimal heuristic search framework called Anchor Search.• C++ implementation of two concrete anchor search algorithms.• Designed a front-to-front heuristic based on the notion of pattern databases (PDBs).	Ongoing
BACHELOR'S PROJECT	<ul style="list-style-type: none">◇ Improving Optimization Algorithms Using GWAP Under the supervision of Mojtaba Vahidi Asl.<ul style="list-style-type: none">• Designed and implemented a GWAP (Game With A Purpose) using the Unity game engine.• Incorporated human common-sense as a heuristic function to enhance blind optimization algorithms.• Designed and implemented an evolutionary algorithm to solve variations of the Facility Location Problem (FLP) as a case study.	Jun 2019
WORK EXPERIENCE	<ul style="list-style-type: none">◇ Programmer and Project Manager NTBG Game Studio, Iran<ul style="list-style-type: none">• Worked as Gameplay Programmer, Tool Designer and Technical Artist◇ Senior Member of SBU GameLab Shahid Beheshti University, Iran<ul style="list-style-type: none">• Worked as a programmer on two academic psychological GWAP projects.	Nov 2018 - Apr 2020 2016 - 2020
PROFESSIONAL DEVELOPMENT AND TRAINING	<ul style="list-style-type: none">◇ Game Development Technical Workshops (Shahid Beheshti University)<ul style="list-style-type: none">• Advanced Design Patterns for Video Games• Level Design Tool Development in Unity Game Engine• Introduction to Game Development with Unity Game Engine	Summer 2019 Summer 2019 Summer 2018

	<ul style="list-style-type: none"> ◇ Teaching Assistantship (Shahid Beheshti University) <ul style="list-style-type: none"> • TA of Advanced Computer Programming Spring 2017 Instructed by Mojtaba Vahidi Asl • TA of Introduction to Programming Fall 2016 Instructed by Monire Abdus
NOTABLE PROJECTS	<ul style="list-style-type: none"> ◇ Personal Projects <ul style="list-style-type: none"> • OmniGrid A Unity toolbox to facilitate the development of grid-based Real-Time Strategy (RTS) games. • CamDirector A responsive camera control tool for the Unity game engine, dynamically adjusting based on the player's position. • Cardify An event-based framework for creating card games in the Unity game engine. • Extended Quadtree Implementation a C++ extension of quadtrees to higher dimensions for efficient querying of closest states in puzzle-solving. • Game Prototypes Find some of them in my portfolio. ◇ Academic Projects <ul style="list-style-type: none"> • Implementation of Kao's algorithm: Finding Mean and Temperature of Multi-branch Games Apr 2022 Combinatorial Game Theory, Instructed by Martin Müller. • Design of A High-Level Embedded System Simulation Tool Jan 2019 Realtime and Embedded Systems, Instructed by Dara Rahmati. • Design and Implementaion of A Compiler Dec 2018 Design entire parts of a compiler accepting a psudo-C language and Implemented by Python. Fundamental Of Compiler Designing, Instructed by Adel Hosseini
COMPUTER SKILLS	<ul style="list-style-type: none"> ◇ Programming Language: C#, Python, C++, Java ◇ Development Tools: Unity Engine (proficient), Unreal Engine (familiar), MonoGame Framework (familiar)
LANGUAGES	<ul style="list-style-type: none"> ◇ Persian (native) ◇ English (fluent) <ul style="list-style-type: none"> • <i>Duolingo English Test:</i> 130/160 • <i>IELTS:</i> 7.5
HOBBIES	<ul style="list-style-type: none"> ◇ Making video games ◇ Playing video games ◇ Listening to music