

Work Experience

Dionic Software

*Munich, Germany (Full-time)*GAME PROGRAMMER ON **INFRASPACE** (FULL-TIME)

10/2022 - Present

- Implemented an [in-game transform handles \(translate, rotate and scale\)](#) using low level rendering
- The core idea of our next multiplayer game's code architecture is based on one of my optimizations
- Optimized pathfinding for large cities [\(e.g. 17000 roads\) from 15.6s to 0.051s by writing a C++ plugin](#)
- Optimized [draw calls \(e.g. for 10000 buildings from 838 to 240\)](#) by writing a custom tool to combine meshes into one mesh
- Programmed a custom "animation to texture" baker tool to convert animation clips to textures. Then wrote a vertex shader that animates these baked textures [to animate up to 10000 buildings](#) (aka VAT)
- Programmed [a custom forest generator](#) by implementing a [Adaptive Multi-Class Poisson Disk Sampler](#)
- Implemented [Gondola Station's placement algorithm](#) to connect two gondola stations over a tricky terrain
- Leading & collaborating with a team of QA testers
- Read the rest [on my portfolio](#)

Pars Cog, University of Tehran

Tehran, Iran

LEAD GAME PROGRAMMER (FULL-TIME)

07/2021 - 02/2022

- Performed as Software Architect & Unity Developer developing & architecting game components
- Developed 2D & 3D Corsi Block for visual/auditory memory improvement of children & elders [\(demo\)](#)
- Led a junior programmer to develop a Dementia assessment game

Dionic Software

*Tehran, Iran (Remote)*GAME PROGRAMMER ON **FOUNDERS' FORTUNE** (FREELANCE)

05/2022 - 10/2022

- Programmed everything in [Founders' Fortune Hobby Update](#)
- Used Render Doc to spot [GPU bottlenecks and optimized them](#)
- Implemented [villager schedule](#). Define at which hour your colonists do which tasks
- Implemented a [character customization system](#). Configure their age and appearance down to their personality and skill
- [Made resources moddable](#) by refactoring most parts of the code base. Previously modders were held back because resources weren't moddable, but now they can create more complex mods
- Implemented a [new Storage System](#) where players can drag and drop furniture into the storage or from storage to the map
- [Implemented Hobbies \(Painting, Music, Writing, Masonry...\)](#) and hooked up artists' assets and animations
- Implemented a [new Sandbox setting](#). Allowing players to adjust their experience to their liking
- Detected and [removed unreachable islands](#)
- Read the rest [here](#)

Amytis Games

Tehran, Iran

UNITY GAME DEVELOPER (FULL-TIME INTERNSHIP)

07/2019 - 10/2019

- Programmed a matchmaking system using Photon Networking for an unannounced multiplayer game
- Improved their path system from waypoint based to Bezier spline by implementing a tool which you can edit the spline in the scene view
- Programmed a configurable 2D enemy AI with animations
- Programmed a camera control for a mobile game

Education

B.Sc. Computer Engineering, [University of Tehran](#)

Tehran, Iran

OVERALL GPA: 3.86 / 4 (18.61 / 20)

09/2017 - 06/2022

- Thesis project:** Developing cognitive games for visual/auditory memory improvement of children & elders - Supervisor: Prof. Hadi(Manouchehr) Moradi

Skills

Programming

C, C++, C#, Python, Bash scripting

Parallel Programming

Jobs, Intel SIMD, CUDA, OpenMP

Problem Solving

Algorithms, Data structures

AI

Unity ML Agents, Reinforcement Learning, Deep Learning

Testing

Unit tests, Mocking

Optimizations

ECS programming, Vertex Texture Animation, Mesh & Texture Baking, Level streaming

Computer Networks

Network protocols, Photon, Cryptography, Wireshark

Profilers

Render Doc, Unity's Profiler, Memory Profiler

Rendering

HLSL, Compute Shaders, Low level rendering

Math

University level math, 3D math

Version Control

Git, GitHub, GitHub Actions

Game Design

Soft Skills

Hard working

Team working

Continuous learning

Commitment

Responsible

Time management

Languages

English

Professional working proficiency

German

Elementary level

Persian

Native or bilingual proficiency

Portfolio

[Online portfolio](#) with additional details about myself, [more work experiences](#), [videos](#), [personal projects](#), [certificates](#), and [honors](#) are available online.