

Amir Azmi

Gameplay and Tools Engineer

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WORK EXPERIENCE

Software Developer Intern – GreenSky Credit Nov 2015 – Jun 2016

- Created a **client information retrieval tool** using Java, SOAP, and REST services so that the sales team could access customer data more efficiently.
- Implemented the **main UI features** of the client information retrieval tool for non-technical users to interact with the application

ACADEMIC EXPERIENCE

Graphics and Tools Engineer Dec 2019 - Present

Custom Entity Component System (ECS) C++ Engine (Solo)

An ECS engine that uses deferred and forward rendering to display images

- Architected **custom C++ engine** following a data driven ECS style approach
- Integrated a **custom game editor** that can update game data on the fly with ImGui
- Designed a **deferred and forward C++ graphics system** in OpenGL 4.4
- Integrated **HDR, bloom, gamma correction, and exposure tone mapping** with a shader effects visualizer to show specifically what part of an object is affected
- Wrote **custom memory manager and profiler** to track system performance and optimize the creation of an AABB Bounding Volume Hierarchies and Octrees

Gameplay Engineer – Spicy Dice Studios Aug 2019 - Present

Metamorphos (Team of 17)

A third-person Dark-Souls like game made in Unity C#

- Developed a **third person-character and camera controller** that handles camera collision
- Created **dynamic third person targeting system** for accurate target selection of enemies
- Worked with designers to **create 7 unique enemy attacks** from paper to final release with the use of a custom behavior tree editor

Gameplay and Tools Engineer – Rising Tide Aug 2018 – Sept 2019

Project: Gemini (Steam Released) (Team of 13)

A 2-player co-op action adventure platformer built in custom C++ engine now on Steam

- Released on **Steam** at https://store.steampowered.com/app/1149630/Project_Gemini/
- Collaborated with designers to **implement 7 unique enemies** from paper to final release
- Implemented **6 environment interactable objects** and collectibles for better level designs and unique level traversing through the game
- Created a **custom particle editor tool** in collaboration with designers and artists for better UI/UX of the tool and efficient creation of special effects when used by designers

EDUCATION

DigiPen Institute of Technology Sept 2017 – Apr 2021

Bachelor of Science in Computer Science in Real-Time Interactive Simulations

ACHIEVEMENTS

DigiPen PAX West 2019
Steam Released
(Project: Gemini)

SKILLS

LANGUAGES

C/C++
GLSL
C#
JAVA

SOFTWARE AND TOOLS

Git | Perforce | TortoiseSVN
Dr. Memory | Valgrind
Windows | Linux Mint 18.3
WPF
Unity 2019.1+
ImGui
Maya 2017
OpenGL 3.3+
RenderDoc
Doxygen

MATHEMATICS

3D Math
Linear Algebra
Calculus I/II
Discrete Mathematics

PERSONAL

SPOKEN LANGUAGES

English (Fluent)
Hindi (Fluent)
Japanese (Familiar)

INTERESTS

Game Jams
Basketball
Table Tennis
Rock Climbing