

Abdullah Altaweel

955 Spring St NW | Atlanta, GA 30309 | (404) 218 9499 | abdullah.altaweel2002@gmail.com

International Student

Education

Georgia Institute of Technology | Atlanta, GA

Bachelor of Science in Computer Science

August 2020 – Present

Expected Graduation, June 2024

Skills

Programming: C++, C, C#, Java, Python (OpenCV, Numpy, PyTorch/Torchvision)

Software: Unreal Engine 5, Blender, GitHub, Photoshop, Unity, Cinema 4D, Plasticity

Project Design: Scrum, Agile, GRASP, SOLID, OOD, OOP, Version Control

Languages: English (fluent), Arabic (native), Chinese (beginner)

Experience

Georgia Tech Undergraduate Research | Atlanta, GA

May 2022 – Present

GT Glacier Geophysics

- Constructed software tools for researchers working on analyzing changes in glacier and ice sheet thicknesses.
- Digitized radar film data by detecting ice-sheet surfaces and beds and interpreting their thickness via pixel-to-meter models.
- Achieved runtime optimization gains (from 120sec to 30sec per image average) whilst maintaining code documentation.
- Trained AI to detect important artifacts within images using computer vision and machine learning (OpenCV / PyTorch).

Game Projects

DRY

Fall 2022

Team Lead, GT Videogame Development Club

Developed a horror game in Unreal Engine 5 over the semester with 50+ team members.

- Brainstormed game mechanics and circular level design to balance fear and game fairness.
- Integrated AI state modules for enemy behavior, props, and puzzle functionality using UE-blueprints and C++.
- Managed weekly sprint meetings with team members to ensure a playable build by the end of the semester.
- Maintained the project's version control for collaborative work with the team by ensuring stable and experimental branches.

ICED

Spring 2023 - Present

Lead Developer, Personal Project

Developed a horror experience in Unreal Engine 5 with a focus on AI behavior and adaptive gameplay attributes.

- Implemented multiple behavior trees for different enemies that communicate with each other to find the player.
- Worked on AI that reacts differently based on nearby smart objects and whether they're being observed by the player.
- Designed adaptive enemy decision-making based on environmental queries and utility scores.

Raid

Spring 2023

Game Design, GT Videogame Development Club

Contributed to level design and asset creation for an open-world 3rd person wave shooter.

- Iterated on the game map depending on gameplay specifications such as enemy spawn locations and quests.
- Adjusted stats for weapons such as fire-rate, ammo capacity, damage, and damage falloff for enjoyability and balance.

Relevant Coursework

- **Objects and Design:** Learned Object-oriented design and programming and common good programming practices. Additionally utilizing industry tools and practices such as Scrum, Agile, GRASP and SOLID for scalable and collaborative software design and implementation.
- **Data Structures and Algorithms:** Implemented data structures such as Graphs, Trees (AVL, 2-4, Heaps), Hashmaps and Linked-lists along with algorithms such as Binary Search, BFS, DFS, Dijkstra's, and pattern matching including KMP, Boyer-Moore and Rabin-Karp.

Activities

UT: Austin | Austin, TX

June 2021 – July 2021

Summer Research Practicum

- Worked on performing small-scale research prototypes and techniques, using the same methods used in peer-reviewed published research.