

Aseem Apastamb

Software Engineer

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Summary

As a highly motivated software engineer, I specialize in object-oriented programming with a keen focus on game development and AI/engine programming. My passion is evident in my dedicated work ethic and a deep desire for knowledge and growth, and I consistently strive for excellence. Beyond technical expertise, I bring strong communication skills to the table, fostering collaborative environments for effective project development and team success.

Skills

Languages

C++, C#, C, Python, Java, GLSL, Lua, HTML

Software

Unity, Unreal, Git, Visual Studio, RenderDoc, OpenGL

Experience

Games For Love | *Gameplay Programmer*

Sep '23 - Present

- Developed third-person platformer in Unreal Engine for a Game Jam called "Jumping Jack"
- Architected and implemented gameplay mechanics using Blueprints, which included jetpack and dash mechanics
- Designed game UI - HUD for jetpack fuel, ability cooldowns, and game menus

Projects

3D Game - "Drifty Thrifty Bang Bang" | *Gameplay/Engine Programmer*

Aug '22 - Apr '23

- Developed in a custom engine using C++, Lua, and OpenGL
- Programmed gameplay mechanics for physics-based car controller, gadgets, and enemy AI like obstacle avoidance
- Improved development iteration time by implementing a Lua scripting system for gameplay and behaviours
- Automated serialization of common data types by integrating a C++ type reflection system

Behaviour Tree - Planning System Hybrid | *AI Programmer*

Jan '22 - Apr '22

- Showcased advanced AI in games using C# scripts in a Unity framework
- Architected a hybrid of Behaviour Trees and Planning Systems for decision making
- Implemented the simplicity and control of Behaviour Trees with the flexibility of Planning Systems

2D Puzzle Platformer - "Lights Out" | *Gameplay/Engine Programmer*

Jan '22 - Apr '22

- Designed player gameplay mechanics and implemented these features in the C++ engine
- Implemented key engine systems including input, physics, level editor and asset serialization
- Contributed to level design, and integrating an Entity-Component-System architecture pattern

Facial Expression Recognition | *Software Engineer*

2020

- Architected various deep learning models using CNNs to classify 7 different human expressions, incorporating multiple public datasets to train models
- Enhanced the project to work on images and video, with the resultant emotion overlaid around subject's face
- Improved usability by deploying a web page using Flask
- Reduced model training time by employing OpenCV to perform data preprocessing, and CNNs using Python libraries like Pandas and Tensorflow for feature extraction

Research Publication

Khire, S., Ganorkar, P., Apastamb, A., Panickar, S. (2021). Investigating the Impact of Data Analysis and Classification on Parametric and Non-Parametric Machine Learning Techniques: A Proof of Concept. *Computer Networks and Inventive Communication Technologies*, vol. 58, pp 211-227. Springer, Singapore.

Education

MS in Computer Science (GPA: 3.92)

DigiPen Institute of Technology

August 2021 - April 2023

Redmond, WA

Relevant Courses

- Object Oriented Design and Programming
- Artificial Intelligence in Games
- Intro to Artificial Intelligence

BE in Computer Engineering (GPA: 3.5)

Maharashtra Institute of Technology

August 2016 - November 2020

Pune, Maharashtra, India

Relevant Courses

- Data Structures and Algorithms
- Object Oriented Programming
- Artificial Intelligence and Machine Learning