Alex Kalams

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Skills
Programming Languages: <u>Proficient</u>: C++, C, C#, Python, JavaScript, HTML <u>Familiar</u>: R, Java, Matlab
IDEs: Visual Studio, VS Code, R Studio, Jupyter Notebook, Eclipse
Tools: Unity, Unreal, Jira, Sourcetree, WSL, Git
Other: Agile Development, Object Oriented Programming, Third Party Library Integration

Experience

AR Development Intern: Schneider Electric (Summer 2023-Present)

- Created an AR application which renders models of electrical cabinets to assist with assembly in Unity with C#
- Processed CAD data from 3D modelers to import and assemble models at runtime
- Collaborated with shop floor workers to design features for improving the user experience and accessibility

Programmer: Wolverine Soft Studio (Summer 2023-Winter 2024)

- Developed a turn-based multiplayer game prototype on student development studio with team of programmers in Unity
- Created a custom matchmaking system using Photon and C# to allow for creating and joining rooms in the lobby
- Built a modular enemy AI system for enemies and bosses using inheritance and coroutines
- Practiced Agile development by using Jira to manage tasks and creating branches to reduce merge conflicts with git

Instructor Assistant: University of Michigan (Fall 2023-Present)

- Assisted course instructor with teaching material in intro game development course
- Hosted hour-long office hours twice a week to help students with problems they faced working in Unity
- Graded student projects while providing feedback to students on ways to improve

Software Engineer Intern: Soundskrit (Summer 2022)

- Worked at Canadian startups developing directional microphones
- Programmed probe to efficiently test 5000+ microphones
- Generated heatmaps and histograms using Python's Seaborn module to display data from tests
- Presented test results to company at weekly meetings

Education
University of Michigan College of Engineering, Ann Arbor, MI
Expected Graduation May 2024, B.S.E. in Computer Science, Minor in Music
GPA: 3.96
Relevant Coursework: Computer Game Design and Development, Extended Reality and Society, Game Engine Architecture, Linear Algebra, Data Structures and Algorithms, Intro to Computer Organization, Foundations of Computer Science

Projects

Pride Engine (2024) - **https://gitlab.eecs.umich.edu/akalams/pride-engine**

- Created a 2D game engine over the course of a semester for game engine architecture class
- Integrated multiple 3rd party libraries including SDL, RapidJSON, and Box2D.
- Embedded Lua as a scripting language for a component-based architecture similar to Unity
- Used Dear ImGui to create a visual editor that allowed for runtime editing of objects in a scene

Orbit VR (2023) - **https://bit.ly/3EBHCr4**

- Developed a VR simulation of the ISS in Unreal that teaches players about the activities and duties that an astronaut performs
- Created a task system that tracks player's progress and guide them as they navigate the station
- Designed a website with a trailer, business model, and information to market our final product

Desktop Defenders (2022) - **https://sprintingquokkas.itch.io/desktop-defenders**

- Developed a complete game in two months in Unity with 4 other teammates
- Collaborated using Jira to manage tasks for weekly deadlines
- Scripted 10 enemies and 2 bosses in C#, each with unique behaviors and attack patterns

About Me
I am a software engineer with experience in game development and Unity development. I also have a passion for gaming and love studying the designs of games and how they are created.