ALEX JAEGER

GAMEPLAY AND AI PROGRAMMER

ABOUT

Recent graduate from Champlain College. A gameplay/AI programmer with advanced mathematics knowledge. Experience working in both Unity and Unreal and proficient in both C++ and C#.

CONTACT INFO

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METHODOLOGIES

- Gameplay Programming
- AI for Games
- C/C#/C++
- Python
- x86 Assembly
- Agile Scrum
- Code Documentation
- QA Testing

TECHNOLOGY

- Unreal Engine
- Unity Engine
- Visual Studios
- Code::Block
- PyCharm
- GIT
- TortoiseSVN

GAME PROJECTS

Mapstermind, Tall Hat Game Studio   2022-2022

Gameplay and UI Programmer

- Senior year capstone project that was published and released on Steam
- Programmed various gameplay and UI systems using a combination of C++ and Unreal Blueprints
- Implemented and iterated on the tutorial cards and visuals
- Implemented and polished different game tasks
- Experimented and implemented secrets hidden throughout the map after certain actions are completed
- Programmed a module UI system for indicating if an object can be picked up by the player
- Programmed a module countdown sequence during the beginning of the game
- Responsible for various bug fixes and code documentation

EDUCATION HISTORY

BS in Game Programming and Minor in Mathematics

Champlain College, Burlington, VT   2018 - 2022

WORK EXPERIENCES

Technology Implementation Intern   05/2021 - 10/2021

Rhino Foods, Burlington VT

- Intern responsible for introducing and implementing new technology into everyday usage in the office space
  - Implemented OCR technology and PDF conversions via C# to better automate incoming invoices and phase out paper within the office
  - Created training videos and documentation to help assist the company with the usage and iteration of new technology
- Performed system maintenance and updates on office computers and technology on the factory floor when necessary

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GAMEPLAY AND AI PROGRAMMER

WORK EXPERIENCES CONT.

Gameplay Programmer
09/2020 - 05/2021
Champlain College's Emergent Media Center, Burlington VT

- Worked within the Unity Engine and programmed various gameplay systems via C# Scripting
- Responsible for programming gameplay systems:
  - Farming/harvest mechanic involving flowers and trees
  - Iterated on and polished the crafting system
  - Iterated on the environmental impact mechanics
  - Implemented new player behaviors that affect the world

Studio Lab Technician
09/2019 - 05/2020
Champlain College's Emergent Media Center, Burlington, VT

- Oversaw a series of routine procedures for the studio space:
  - Equipment check-in/out
  - Monitoring work logs
  - Troubleshooting and performing maintenance on lab computer and equipment
- Conducted QA testing on studio games:
  - Performed testing of new games features and functionality
  - Sought out and identified bugs within current builds
  - Provided meaningful feedback to the development team based on the current build

Conference Associate
March 21 - 25, 2022
Games Developer Conference, San Francisco, CA

- Guarded doors and scanned attendees' badges for event sessions
- Monitored conference sessions, prepared and assisted speakers from different companies such as Microsoft, Ubisoft, and Giant Squid Studios
- Assisted attendees and answered attendee questions

PERSONAL PROJECTS

Obstacle Avoidance AI
Unity2D/C#

- Unity project showcasing an obstacle avoidance AI that attempts to avoid obstacles in the scene. The AI can avoid both moving and stationary objects
- Implemented a variety of different movement behavior types:
  - Wander: Randomly wanders around the scene avoiding obstacle
  - Path follow: Follows a series of nodes around the scene while avoiding obstacle
  - Flocking: Able to produce complex movement with multiple agents around the scene while avoiding obstacles. Movement is a combination of cohesion, separation, and alignment.

Flow Field Demo
Unity3D/C#

- Unity project that showcases a flow field application in terms of pathfinding
- Was able to direct a large amount of AI agents around a scene without performance issues
- Includes a visualizer that for the different fields to show how the algorithm works in real time

Universal Dialogue Manager
Unity/C#

- Dialogue system that uses text files to easily create different dialogue for NPC's
- Able to also control the dialogues speed using special symbols within text files
- Complementary audio system that works in tandem with the dialogue system for sound fonts/effects when talking to NPC's
- Can be easily implemented in both Unity 2D and 3D
- Created with internationalization in mind so that controls for text files make sense on keyboards with different languages

Pathfinding Visualizer
SDL2/C++

- Program that visualizes different pathfinding methods
  - Visualizes the A*, Breadth First Search, Depth First Search, and Dijkstra's pathfinding algorithm
- Finds the shortest path from where a player last clicked to where a player currently clicks
- Keeps tracks of pathfinding length, number of nodes processed, and time elapse