Brent Goldstein

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Education

Rensselaer Polytechnic Institute Troy, New York, Graduation: 2024
Bachelor of Science in Computer Science and GSAS (Games and Simulation Arts and Sciences)

Skills

Software Skills

Operating Systems (Windows, Mac OS X, Linux, Ubuntu) | IDE's (Visual Studio, VS Code, Rider, Eclipse) | Game Engines (Unreal Engine 4, Unreal Engine 5, Unity, Godot, Game Maker Studio 2) | SCM/Version Control (Perforce, Git, GitHub) | Microsoft Office (Word, Excel, Powerpoint) | Adobe (Photoshop, Illustrator, Premier) | Automated Testing Frameworks (Gauntlet, Junit, Microsoft Unit Testing Framework for C++) | Clip Studio Paint | Blender | ImGui | Machine Learning Tools (Pytorch, TensorFlow) | Agile Development | CMake

Programming Languages

C++ | Java | C# | Python | Javascript (NodeJS, ReactJS) | TypeScript | C | MIPS | Prolog | Scheme | Haskell | HTML/CSS | Unix, Git

Work Experience

Amplifier Game Invest: Stockholm, SE (September 2023 - January 2024)
Contractor Junior Game Programmer and Game Designer (ABC)

- Implemented flexible full-stack code in Unreal Engine 5 using C++, utilizing software best practices to ensure performance.
- Utilized data analysis skills to create and maintain spreadsheets for fine-tuning game balance.
- Designed and documented game mechanics and design, including puzzle design, level design, and enemy AI implementation.

Curtail Inc.: Anaheim, CA (June 2023 - August 2023)
Software Engineering Intern

- Conducted in-depth research on HTTP/2 and gRPC to enhance the company's technical capabilities.
- Assisted in migrating the existing framework to seamlessly support HTTP/2 and gRPC protocols.
- Collaborated with the development team to ensure the successful integration of HTTP/2 and gRPC into the project.
- Contributed to the optimization of network performance through the implementation of HTTP/2 and gRPC best practices.

Warner Bros. Games: Burbank, CA (June 2022 - August 2022)
Software Engineering Intern

- Created an automated testing framework for Unreal Engine 4 integration with internal game management infrastructure. Coordinated with other team members and company branches and handled the pipeline and version control through Perforce.
- Built a full-stack plug-in for Unreal Engine 4 using C++ to analyze demo software for copyright infringement by comparing screenshots and achieved 100% accuracy.
- Wrote unit tests using C++ and assessed them with ImGui, Gauntlet, and the created testing framework.
- Familiarized with agile development and the software development life cycle with JIRA, sprints, kanban, etc.

B-Games: Sole Proprietorship: Upper Saddle River, NJ (September 2019 - present)
Owner

- Founded a sole proprietorship that develops, designs, codes, manages, and markets games and software.
- Coded the B-Games website using HTML5/CSS and Javascript: https://bman7222.github.io/
- Developed multiple open-source prototypes using Unity Engine and C# and can be found on GitHub: https://github.com/bman7222
- Completed over three game jams with the RPI Game Jam club publicly available on Itch.io: https://gorillabman.itch.io/

Projects

Artificial Intelligence Agents: Troy, NY (January 2023 - March 2023)
Programmer

- Built artificial intelligence agents in Unity using C# that handle real-time dynamic decision-making.
- Constructed table-based and neural network-based Q-Learning for AI agents' behavior selection.
- Designed agents to be able to follow paths, maneuver around moving obstacles, travel to targeted objectives, and many other behaviors.
- Used Python and Anaconda for training Unity ML-Agents
- In Python, created a text-adventure game that integrated GPT, using a custom-trained model to discern player actions and intentions from input text and make decisions based on the game's current state.
- Implemented a custom-made Dijkstra algorithm for creating heat maps for AI agents' pathfinding

Bottled Up: Troy, NY (January 2023 - March 2023)
Programmer, Game Designer, Level Designer

- Led design and implementation for character and combat features, including combat encounter design, gray boxing levels, and enemy AI.
- Created and balanced game systems and managed version control through Perforce.
- Wrote scripts for their pathing, movement algorithms, and behavior of enemy AI in Unity using C#.

Jiangshi Jump: Troy, NY (October 2022 - November 2022)
Programmer, Game Designer, Level Designer

- Used C# to create a dynamic visual representation of kinematic formulas to show the trajectory from the player to the mouse's location on the screen.
- Implemented a depth-first search algorithm to efficiently calculate each point of a trajectory arch starting with the endpoint.