LUKAS LICON

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TECHNICAL SKILLS

- **Programming Languages:** C++, C, C#, Python
- **Tools/Engines:** Unreal Engine 5, Unity, Jira, VScode
- **Specialties:** Model training, packaging runtime executables, llama.cpp, whisper.cpp, onnx, piper
- **Version Control**: Git, Gitlab, Github, Familiar with Perforce (Helix Core)
- **Additional:** Data Structures & Algorithms/Object-Oriented Programming, Behavior trees, deep learning, state machines, MCTS, AI Pathfinding (A*, Djikstra's, BFS, DFS, Greedy, etc.)

WORK EXPERIENCE

AI/C++ Engineer at Glade (YC23) | San Francisco, CA (Remote) | Oct 2024 - Present

Created custom UE5 plugins for external sale, used whisper.cpp, llama.cpp, onnx, and piper to create low latency offline speech to speech inference models. Created python scripts for fine tuning Llama3:1B to create and quantize a 1.2 gb model emotion based LLM for dynamic relationship building, curated custom data for LLM training. Worker in client/server application development for multiplayer environment, multicasting and replication debugging, general gameplay programming for abilities using GAS.

Application Developer at Bluu Kazi | National Harbor, MD (Remote) | July 2024 - Oct 2024

Collaborated with a team to build a mobile app for Android. Utilized tools like Jira, Gitlab, & Figma, & contributed to agile development, task prioritization, & performance optimization. Use of Kotlin & Android Studio for development.

GROUP PROJECTS / Games

- **Cursed Crown:** Steam Link **-** Unreleased UE5, playtested at GDC, won GDC best in play. Releasing mid-late 2026. I solely developed the finetuned LLM and AI companion emotions, relationships, actions, etc. Also responsible for all development of enemy behavior trees, boss behaviors trees, and enemy ability implementations.
- **Crabity:** Steam Link- Released on Steam, **Unity** (C#): Solely developed "Time Trials", daily procedurally generated maps with design constraints created through pathfinding algorithms. Debugged gameplay mechanics & player movement
- **Procedural City Generation:** - Github Link - **Unity AI projec**t (C#): Created a wave collapse function for procedurally generating cities based on constraints & asset manipulation

INDIVIDUAL PROJECTS

- **C++ Client-Server Robot State Machine with TCP Communication:** Client-server system for controlling a robot's state machine via TCP sockets, using serialized messages for communication. - StateMachine Github Link
- **C++ Matrix operations calculator for sparse matrices:** Built a calculator optimized for sparse matrices to improve memory usage & computational efficiency. - Matrix Github Link
- **C++ Fractal Tile Renderer:** Created an asynchronous fractal renderer with a message queue system for task distribution among threads using std::async & ThreadSafeQueue. - Fractal Github Link
- **C++ Item Loader:** Developed a JSON-based item loader system with inheritance & class properties, enabling support for custom items.- Item Loader Github Link
- **Unreal Engine 5 Project (C++):** Developing a Souls-like combat ARPG in Unreal Engine using C++. Smoothing out movement and fighting mechanics. Also, working on enemy smart AI. Git LFS for storage. (On standby while at Glade) Unreal Project Github

EDUCATION

University of California, Santa Cruz | GPA 4.0 | Graduated June 2024 Santa Cruz, CA

Baskin School of Engineering | B.S. Computer Science: Computer Game Design | Summa Cum Laude
Certifications: Atlassian University - Jira Fundamentals Badge, 7/2024