LIOR YAARI

Game Developer | Systems Designer | Tool Creator

CONTACT INFORMATION

- **Email:** liory7@gmail.com
- **LinkedIn:** linkedin.com/in/lior-yaari-4037a11a2
- **GitHub:** github.com/Lint111
- **Portfolio:** lint111.github.io
- **itch.io:** liory7.itch.io

PROFESSIONAL SUMMARY

Game developer and systems designer studying Independent Game Production at Howest DAE, with hands-on experience creating engaging gameplay experiences and robust game systems. Specializes in systems architecture, gameplay programming, and technical art, with self-taught expertise in Vulkan and game engine architecture. Passionate about designing and implementing gameplay mechanics, interactions, and creating modular systems. Seeking opportunities in an environment that values systems design, gameplay implementation, and technical creativity.

TECHNICAL SKILLS

Programming Languages - C# (Advanced) - Game logic, systems architecture, tool development - C++ (Advanced) - Low-level systems, graphics programming, template metaprogramming - C++23 (Proficient) - Modern features, compile-time type safety

Game Engines & Graphics - Unity (Advanced) - 3+ years of project experience - Vulkan API - Self-taught low-level graphics programming and rendering - Game Engine Architecture - Self-taught systems design and implementation - ShaderGraph - Node-based visual shader creation - Shader Programming (Learning) - HLSL/GLSL code-based shaders

Design & Architecture - Game Design - Mechanics, systems, player experience - System Design - Modular architecture, scalable solutions - Gameplay Mechanics - Design and implementation - Player Interactions - Input systems, feedback, game feel - Tool Creation - Editor extensions, workflow improvements - Level Design - Spatial design, pacing, player guidance - Technical Art - Shaders, VFX, rendering optimization

Development Tools & Workflow - Git & Version Control - Branching strategies, collaboration - Perforce - Version control for game development - Visual Studio / VS Code - Primary development environments - Debugging & Profiling - Performance optimization

---

FEATURED PROJECTS

VIXEN - Vulkan Render Graph Engine | *Solo Creator &*

Researcher

C++23, Vulkan 1.4, SPIRV, CMake | Academic Research Project - 2024-2025 | Ongoing

Production-quality Vulkan graphics engine featuring graph-based rendering architecture with compile-time type safety, currently being extended as voxel ray tracing research platform for academic publication.

Key Contributions: - Architected and implemented **node-based render graph system** with 19+ specialized nodes and compile-time type safety - Developed **advanced shader management** with automatic SPIRV reflection and descriptor layout generation - Built **persistent cache system** (9 cachers) with async save/load and lazy deserialization for optimal performance - Implemented **comprehensive testing framework** (40% coverage, 10 GoogleTest suites) with VS Code integration - Designed **event-driven invalidation system** for automatic resource rebuilding and dependency management - Self-studied and applied **Vulkan API**, **game engine architecture patterns**, and **graphics optimization techniques**

Technologies: C++23, Vulkan, SPIRV-Reflect, CMake, GoogleTest, glslang
Repository: github.com/Lint111/VBVS–VIXEN

Verdant Swarm | *Game Designer & Programmer* | *Technical Lead*

Unity, C#, ShaderGraph | Game Jam Project - 2024 | 4-person team

Environmental restoration experience where players spread greenery across barren planets.

Key Contributions: - Led technical architecture and co-directed design process - Implemented custom **planet greenery spreading shader** for dynamic visual feedback - Developed **object pooling system** for plants and trash elements to optimize performance - Managed complete **game flow implementation** including start/end states and UI systems - Handled debugging and optimization across all game systems

Technologies: Unity, C#, ShaderGraph
Play: antoine-foucault.itch.io/verdant-swarm

Fitness Kingdom | *Programmer*

Unity, C#, MediaPipe (Machine Learning) | Client Project - 2024 | 5-person team, 4 months

Mobile fitness game developed for Howest Sport Innovation Campus, combining gesture recognition with city-building mechanics.

Key Contributions: - Designed and implemented complete **city-building system** including placement, upgrades, and progression - Collaborated on **MediaPipe machine learning integration** for real-time gesture tracking - Developed **challenge validation** and **reward systems** connecting fitness activities to city growth - Served as **general problem solver** supporting team across multiple game systems - Worked directly with client to iterate on features and meet project requirements

Technologies: Unity, C#, MediaPipe, Mobile Development
Trailer: youtube.com/watch?v=CbLditx_G1Y

Nurtured Apathy - Vertical Slice | *Sole Creator*

Unity, C# | Academic Project (Game Design 3 Final) - 2024

Puzzle platformer featuring emotion-based powers with a unique FILO ability system.

Key Contributions: - Designed and implemented **FILO (First In, Last Out) ability management system** - Created comprehensive **pickup interaction system** for ability collection - Developed multiple puzzle levels showcasing **level design** and pacing skills - Balanced mechanics for engaging puzzle-solving experience - Implemented UI/UX for clear player feedback

Technologies: Unity, C#, ProBuilder
Play: liory7.itch.io/nurtured-apathy-vertical-slice

Web of Lies: Spreading Misinformation | *Backend Systems Programmer*

Unity, C# | Game Jam Project - 2024 | 5-person team

Social deduction game where players identify the “Spy” through interrogation mechanics.

Key Contributions: - Designed and implemented core **interrogation logic system** managing turn-based gameplay - Developed **question management** and response validation systems - Created **dynamic subtitle system** for character dialogue display - Integrated backend systems with UI for seamless player experience - Collaborated with designers to balance interrogation mechanics

Technologies: Unity, C#
Play: liory7.itch.io/web-of-lies-spreading-misinformation

EDUCATION

Howest DAE (Digital Arts and Entertainment)
Independent Game Production (IGP)
Kortrijk, Belgium
2022 - Present

Relevant Coursework: - Game Design & Development - Systems Programming - Computer Graphics - Gameplay Programming - 3D Graphics Programming

Self-Study & Personal Learning: - Vulkan API & Low-level Graphics Programming - Game Engine Architecture & Systems Design - Advanced C++ and Memory Management - Rendering Pipelines & Optimization

---

ADDITIONAL SKILLS

Soft Skills: - Team Collaboration & Communication - Problem-solving & Critical Thinking - Time Management & Meeting Deadlines - Giving & Receiving Constructive Feedback - Adaptability in Fast-paced Environments

Areas of Interest: - Gameplay Systems Architecture - Systems Design & Implementation - Gameplay Mechanics & Player Interactions - Technical Art & Visual Effects - Graphics Programming & Rendering - Game Engine Architecture - Tool Development & Editor Extensions - Procedural Generation - Game Feel & Polish

Career Goals: Seeking a role that combines systems design, gameplay implementation, and technical art in a creative and collaborative environment. Passionate about creating engaging player experiences through well-architected gameplay systems and technical innovation.

AVAILABILITY

Available for internships, junior developer positions, and collaborative game development projects. Open to opportunities that focus on systems design, gameplay mechanics implementation, and technical art.

Preferred Roles: - Gameplay Programmer - Systems Designer - Technical Designer - Technical Artist - Game Engine Programmer

Pronouns: She/Her

References available upon request