Ian Maksimovic

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Education

University of Florida Gainesville, FL

Bachelor of Science in Computer Science *Aug. 2024 – May 2028*

Relevant Coursework: Data Structures and Algorithms, Computer Organization, Discrete Structures, Python/C++ Programming, Computer Graphics, Operating Systems, Software Engineering

Experience

Training Lead Oct. 2025 – Present

UF Software Engineering Club *Gainesville, FL*

- Developed a comprehensive full-stack training program, mentor trainees, and guide their onboarding into the club

Full Stack Web Developer Oct. 2024 – Jan. 2026

UF Software Engineering Club *Gainesville, FL*

- Created a backend search and filtering API for club video workshops that dynamically processes queries, sorts results, and applies filters based on parameters
- Improved efficiency and speed by implementing pagination through MongoDB aggregation pipelines
- Implemented email verification for new users, streamlining the signup process and enhancing website security
- Collaborate in an agile environment through biweekly sprint meetings, version-controlled development with GitLab, and peer code reviews to ensure to ensure efficient and productive development cycles

Projects

Ray Tracer | *C/C++, OpenGL* Jan. 2026 – Feb. 2026

- Built an image-order ray tracer from scratch in C++ with perspective and orthographic camera system
- Implemented ray-object intersection and rendering with a polymorphic Shape class
- Developed a lighting system with ambient, Lambertian diffuse, Phong specular shading, and reflective/glazed surfaces using recursive ray-tracing

chesstwin.net | *Next.js, Node.js, React, Supabase, JavaScript* Oct. 2025 - Present

- Built and currently developing a full-stack chess analysis website enabling users to upload or paste PGN files for engine analysis and similarity matching against a database of grandmaster games
- Integrated Stockfish Web Assembly directly in the browser, supporting user configuration and MultiPV to display variation lines with per-move evaluations
- Implemented game-similarity algorithms using cosine similarity over precomputed vectors to identify strategically similar games stored in Supabase/Postgres efficiently

Procedural Dungeon Generator | *Godot* May 2025 – Aug. 2025

- Created a procedural dungeon generation system in the Godot game engine capable of generating random map layouts from customizable parameters
- Implemented Delaunay Triangulation, Prim's algorithm, and A* to efficiently generate dungeon layouts and enable NPC pathfinding
- Built dynamic 3D environments with events, pathfinding monster, a custom character controller, and logic for instantiating, connecting, and populating 3D rooms/hallways

Clubfinity | *JavaScript, React Native, MongoDB, Node.js, Express.js* Oct. 2024 - May 2025

- Worked on Clubfinity, a club management mobile application connecting student organizations across campus
- Developed new mobile features using Expo, including a club invitation system that allowed admins to invite, authenticate, and onboard new members, incorporating role-based authorization and database schema design.
- Collaborated with team members to integrate frontend and backend components, troubleshoot issues, and ensure efficient development sprints.

Technical Skills

Languages : C/C++, Python, JavaScript/TypeScript, HTML/CSS, Lua, GDScript
Frameworks : MongoDB, Express.js, React, Node.js, Next.js, SQL, Tailwind
Developer Tools : Git, Docker, Portainer, VSCode, Visual Studio, PyCharm, CLion, Godot, Unity, Linux, VirtualBox, Roblox Studio