Nikita Muzychenko

305-219-7890 | **nmuzy001@fiu.edu** | **linkedin.com/ln/nikitamu**
github.com/muzychenkonikita | **muzychenkonikita.github.io**

Education

Florida International University — **Miami, FL**
Bachelor of Science in Computer Science — ***Aug. 2025 – Apr. 2029***

Experience

Graphics Engine Developer — **Sep. 2025**
Shellhacks 2025 - Euclid — ***Miami, Fl***

- Built a native OpenGL renderer as a DLL and a .NET/Avalonia UI, connecting them via a C++/C# interop bridge for real-time scene updates.
- Implemented an asset pipeline: drag-and-drop .OBJ, unit-scale normalization, AABB, transforms, and editor gizmos (translate/rotate/scale).
- Structured a cross-platform project with Premake and modular folders for renderer, UI, and debug host, enabling fast local iteration.
- Presented a working demo to mentors/judges; documented architecture and next-steps for post-hackathon development.

Team Lead — **Oct. 2024**
NASA Space Apps Challenge - Exosky — ***Pattaya, TH***

- Coordinated task delegation between programmers, physicists, and designers, ensuring efficient collaboration across disciplines.
- Documented the project's technical pipeline and delivered a final pitch to judges, strengthening presentation and communication impact.
- Contributed to the development of a custom graphics engine, enabling real-time visualization of exoplanets and stars in the final product.

Projects

2D Engine | ***C/C++, OpenGL, GLFW, GLAD, ImGui, GLSL, Jira*** — **Sep. 2025 - Present**

- Designed and developed a lightweight API for 2D game development, reducing setup complexity for C/C++ and OpenGL projects.
- Implemented a texture atlas using the Skyline Bottom-Left algorithm, improving memory efficiency and rendering performance.
- Built a small demo game to validate API functionality and showcase usability.

Shader Interface | ***C/C++, OpenGL, GLFW, GLAD, ImGui, Jira*** — **Aug. 2025 - Present**

- Built a custom GLSL shader editor with real-time rendering, enabling interactive visual experimentation.
- Implemented flexible input system supporting unlimited custom shader parameters, expanding creative options for users.
- Enabled saving and loading of shader files, improving workflow and project reusability.

MixerGL | ***C/C++, OpenGL, GLFW, GLAD, ImGui, GLSL*** — **Dec. 2024**

- Developed a real-time 3D modeling tool with dockable windows, enhancing user interface flexibility.
- Implemented object creation and property controls with unlimited scalability, supporting complex scene setups.
- Added viewport gizmos for translation, scaling, and rotation, enabling intuitive object manipulation.

Technical Skills

Languages: ***Java, Python, C/C++, SQL (MySQL), GLSL***
APIs/Libraries: ***OpenGL, GLAD, GLFW, ImGui, JavaFX***
Developer Tools: ***Git/GitHub, VS Code, Visual Studio, Xcode, IntelliJ, CMake, Premake, Jira***