

CONTACT DETAILS

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Miguel Martinez

Graphics Programmer
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EXECUTIVE SUMMARY

Graphics Programmer with a foundation in software engineering and game development, skilled in a variety of programming languages and specialized in Vulkan-based raytracing.

Recognized for strong problem-solving capabilities and attention to detail. Looking to leverage technical expertise and enthusiasm for visual computing in a Graphics Programmer role.

TECHNICAL SKILLS

- C++
- C#
- OpenGL
- Vulkan
- Shaders
- Python
- Networking
- Behaviour Trees
- Leadership
- English
- Unity
- Unreal 4/5
- Raytracing
- 3D Math
- Winsock
- Visual Scripting
- Debugging
- AI Programming
- Problem-Solving
- Blackboards
- Spanish



miguelmartinezolivares.com



PROJECT EXPERIENCE

Graphics Programmer, Vulkan Raytracing Renderer

October 2023 - Present | Personal project – Orlando, Florida

- Developing a Vulkan-based raytracing renderer for enhanced graphics.
- Implementing raytracing algorithms for realistic lighting and shadows.
- Optimizing resource management using Vulkan API.
- Applying multi-threading for performance improvement.

Developer, Shellhacks 2023 Hackathon

September 2023 | Shellhacks – FIU, Florida

- Developed an AI-driven calendar goal-achiever assistant using GPT-4, Python, and Django.
- Engineered goal-based planning algorithms to create personalized task lists, deadlines, and guidelines.

Lead Game Developer, Orlando Magic Innovation Challenge 2023

January 2023 | Orlando Magic - Amway Center, Orlando, Florida

- Developed a game concept within a 3-day timeline, resulting in 1st Place recognition.
- Contributed under tight deadlines while effectively collaborating with team members.
- Created comprehensive game design documentation, including mock-ups, menu layouts, and gameplay flowcharts.

Lead Developer, Realm Rumble

May 2023 - October 2023 | Full Sail University – Orlando, Florida

- Leading a team of 4 in the development of a real-time multiplayer strategy game.
- Responsible for AI programming and systems development.
- Utilizing Unreal Engine 5, focusing on Behavior Trees, Blackboards, and real-time replication for multiplayer scenarios.

ACADEMIC HISTORY

Full Sail University (GPA 3.6)

B.S. in Game Development and Computer Science | October-2023

- Lead programmer developing “[Realm Rumble](#)” (Unreal Engine 5.1), multiplayer RTS
- OpenGL [Level Renderer](#), imported files from blender and rendered them in real time
- Boss programmer, and cinematics programmer for “[Zomderbar](#)” (Unity3D)
- Development of Network Program “[NetChat](#)”(C++) communication by TCP & UDP.

CAREER HIGHLIGHTS

- 1st Place winner at the Orlando Magic Innovation Challenge 2023 hosted by Orlando NBA team, developing a video game named “Sportsverse”
- 3rd Place in the Global Game Jam 2023 developing “Forgotten Roots”.
- Shellhacks2023 Participation: Developed a personalized AI-driven calendar in the largest Florida hackathon to date.