

Matthew Carlson

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www.mdcpanama22.github.io | www.github.com/mdcpanama22

Skills

- Golang, C++, C#, Java, Python, Lua, JavaScript, TypeScript, Bash, React.JS, Node.JS, SQL, Neo4j, MongoDB, Kafka, Docker, REST API, Github, Unity, Unreal Engine, Roblox Studio, OpenGL, Shaders, Github, Jira, Postman, LaTeX, Fluent Spanish

Work Experience

• Gameplay Engineer

Diamond Age 3D

2022 - 2023

- Developed full-stack solutions with Go and React for 3D printing machines in home construction.
- Implemented Neo4j libraries to optimize asset management and state machines, elevating operator efficiency.
- Increased on-site machine efficiency by 5% through innovative, reusable algorithms for diverse pathing solutions.
- Designed a Unity tool for visualizing house floor plans, enabling real-time robot path observation in construction stages.

• Full Stack Developer

AlphaHub

2021 - 2023

- Designed parser to evaluate crypto and stock data from various sources, enabling comprehensive strategy analysis, and data visualization, and seamless API integration.
- Led a full-stack system with Erlang/OTP backend for real-time operations, and supervised SQL and AWS databases housing user and trading signal data.
- Developed RESTful API and websockets to enable users the ability to create their own automated trading solutions.

• Computer Science and Game Programmer Tutor

The Learning Center LATAM

2020 - 2023

- Developed a bilingual (Spanish) curriculum, with a focus on Unity (C#) integration, to deepen students' understanding of computer science and game development.
- Bolstered student enrollment by 20% by delivering engaging and interactive lessons tailored to individual learning needs, thereby cultivating a positive and effective learning environment.

• Associate Programmer

Cognitive Immersive System Labs (CISL), The Mandarin Project

2018 - 2019

- Contributed to the creation of the Immersive Language Learning Environment (ILLE) using Unity, IBM Watson, and other tech, enhancing language acquisition with immersive experiences.
- Built a data pipeline with React and Flask Python for a web-based language learning tool, facilitating real-time data processing and interaction between AI agents and students.

• Associate Programmer then Project Manager

Eco Resilience Games

2017 - 2019

- Guided a developer team in applying findings from the IBM-backed Jefferson Project, emphasizing Unity-based technologies (VR, AR, MR) to educate on global freshwater ecology.
- Innovated and integrated game features in the virtual reality simulation, amplifying immersion and enriching the educational experience.
- Established a temporary virtual touch pool exhibit at Leah Echo Museum in Vermont, enhancing educational opportunities about local freshwater ecology.

Education

Bachelor of Science in Computer Science and Games and Simulation Arts and Sciences

Rensselaer Polytechnic Institute

Troy, NY