# Conor O'Malley

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## Education

**University Of Central Florida** **Aug. 2020 – Dec 2023**
*Bachelor of Science in Computer Science, BS* *Orlando, FL*

**Cypress Creek High School** **Aug. 2016 – June 2020**
*High School Diploma* *Orlando, FL*

## Relevant Coursework

- Computer Science I & II
- Discrete Structures I & II
- Security in Computing
- Robot Vision
- Machine Learning
- Principles of OOP
- Differential Equations
- Computer Graphics

## Experience

**Dosed Inc.** **Aug 2018. – Feb. 2019**
*Backend Developer* *Remote*

- Worked to develop an online shopping web-application.
- Created database models, express middleware, routes, and services such as a role-permission service, a user service, and a shipping-address service.

**StemEduc8** **June 2018 – September 2018**
*Math and Computer Science Tutor* *Orlando, FL*

- Worked with students to teach them computer science and math skills, both one-on-one and in a classroom format, with a focus on calculus and programming.

## Projects

**School Nodemap** | *Javscript, Canvas API* **June 2018 - Aug 2018**

- Built an online tool to create visual graphs, allowing for labeled nodes, weighted edges, and cosmetic settings on nodes.
- Made a separate tool that utilizes those graphs for helping students plan out class navigation at their school.

**Raymarching Mandelbulb Visualization** | *Javscript, WebGL, GLSL* **January 2021**

- Using WebGL and raymarching algorithims, I created an in-depth visualization of the mandelbulb (a three-dimensional extension of the mandelbrot set) with advance camera controls and lighting. The rendering was done completely from scratch in a fragment shader.

**Budget VR** | *Javscript, WebGL, Socket.IO, Express* **KnightHacks 2021**

- In 24 hours made a virtual video call site, where users can connect online and see each others video feeds represented as 3D objects in virtual space (Before Meta Verse was even announced)

**Capstone Project : Electronic Enforcers** | *Unity, C#, Blender* **June 2023 - Nov 2023**

- Made a military training simulator that allows players to test themselves in realistic electronic warfare scenarios.
- Used brand-new Unity paradigm DOTS, which required me to make various systems with no examples or clear documentation.

**WebGPU Marching Cubes** | *Javscript, WebGPU, WGSL* **Oct 2023 - Dec 2023**

- In 24 hours made a virtual video call site, where users can connect online and see each others video feeds represented as 3D objects in virtual space (Before Meta Verse was even announced)

## Technical Skills

**Languages (in order of proficiency)**: Javascript, C++, WGSL, GLSL, Python, Java, Rust, C#
**Developer Tools**: VS Code, gcc, git, bash, Unix, npm, aws, gcp
**Technologies/Frameworks**: TypeScript, Express, Node.js, Vue, React, MongoDB, Svelte

## Leadership / Extracurricular

**Programming Team** **Aug. 2020 – July 2022**
*Varsity Member* *University of Central Florida*

- Placed highly in regional and national competitions including ICPC and Mercer.
- Developed critical problem solving and team building skills while competing.
- Learned various additional computer science data structures, algorithms, and strategies.