

# Jonathan Bogie

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## EDUCATION

### University of Oregon

*Bachelor of Science in Computer Science, Minor in Mathematics*

Eugene, OR

*Sep 2020 – Present*

## TECHNICAL SKILLS

**Languages:** C++, C#, C, Lua, Python, JavaScript

**Libraries:** Pandas, NumPy, MATLAB

**Creative:** Photoshop, Blender, Maya, After Effects

**Engines:** Unity, Unreal Engine

## EXPERIENCE

### Software Developer Intern (Upcoming) | Walt Disney Imagineering R&D

Jun 2023 – Sep 2023

- Develop plugins and tools using Blueprints and C++ within Unreal Engine to support Art/Tech teams
- Provide project teams with software prototyping and data visualizations for simulating new experiences
- Implement custom scripts and interfacing with Python for 3D modeling in blender and maya

## PROJECTS

### Cyclone Culling | C#, Unity, 3D Graphics

Apr 2021 – Jul 2021

- Game tool for dynamically rendering objects with Unity's scriptable pipeline
- Implements spatial querying and partitioning techniques for optimizing large searches
- Features object pooling and level-of-detail configurations to reduce resource consumption

### Scaler Building | C++, Unreal Engine, Linear Algebra, Computational Geometry

Jun 2020 – Mar 2021

- A gameplay system that enables the construction and texturing of 3D user-generated structures
- Includes 3D mathematical applications of triangulation, straight skeletons, vectors, and matrices
- Developed a graphical interface with navigation and user experience in mind

### Elixir2D Engine | JavaScript, HTML, CSS

Aug 2022 – Dec 2022

- An open source engine for creating engaging object-oriented web games
- Implements API for 2D physics simulations, graphical interfaces, and input handling
- Leveraged an SQL relational database to collect, store, and analyze player data

### DejaVu Editor | C++, Lua, Unreal Engine, Plugin

Jul 2022 – Nov 2022

- Template-based map editor for facilitating the design of more performant maps in games
- Features a graphical interface and interactive tools to improve the designer's workflow and ease
- Leveraged the flyweight design pattern to minimize duplication of shared data and reduce memory

### Documentation Sites | JavaScript, HTML, CSS

Jun 2021 – Jan 2023

- Created and deployed documentation wikis for developers to utilize API from my projects
- Features front-end frameworks and component based design with React and Node
- Conducted testing to ensure optimal performance across multiple platforms and devices

### Portfolio Site | JavaScript, HTML, CSS

Oct 2022 – Dec 2022

- Utilized Elixir2D to create a game-oriented portfolio showcase
- Engages visitors by showcasing my projects in a fun and creative way

## EXTRACURRICULAR

### Game Development Club

Nov 2021 – Present

*Member*

- Work together and individually to create, publish, and learn about video games with peers

### Google Developer Student Club

Oct 2022 – Present

*Member*

- Collaborate with peers to gain technical skills through hands-on workshops using various Google API