

# Ryan Nguyen

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## Profile

My name is Ryan Nguyen, and I am an international student with a passion for all things related to digital arts and computer science. I have in-depth experience in Web Design, UI/UX Design, Full-Stack Design, Game Design, and Graphical Programming. Additionally, I have over two years of professional experience in the graphic design industry.

## Skills & Language

### Skills:

- Algorithms & Data Structures, Software Engineering, Test-driven Development, Full-stack Programming, Database, Machine Learning.
- Graphic Programming, UI/UX Design.
- Graphic Design, Motion Graphic Design.

### Programming Languages:

- C, C++, C#, Java, Python, ANTLR, SQL, HTML, CSS, JavaScript.

### Tools & Technologies

- **Web Development:** React, Three.js, WebGL, React Three Fiber, Tailwind CSS, Shadcn/ui, Redux, Qt6, GSA.
- **Build Tools:** Gradle, Maven, Vite, Cmake.
- **IDEs & Editors:** VS Code, IntelliJ, Visual Studio, MySQL, QT Creator, Unity Editor.
- **Design Tools:** Adobe Photoshop, Lightroom, Illustrator, After Effect, Premiere.

## Education

AA in Computer Science	BS in Computer Science
Edmonds College   Washington   2020 – 2023	Bellevue College   Washington   2023 - 2025

## Project

### Portfolio Website With Three.Js Intergration

- Created an interactive, responsive, and realistic 3D Earth using React Three Fiber, and custom WebGL shaders.

- Created an intuitive, and smooth User Interface with Shadcn/ui, React, GSAP, and Tailwind.
- Maintained a modular design principle with the help of Redux and React Components.

## **Turn-Based Role-Playing Game Combat System In 3d Unity**

- Created an extendable, generalized, and modularized turn-based combat system for a limitless number of entities.
- Applied realistic lighting, volumetric fogs, and wind simulation to enhance immersion for the playable scene.

## **Disease And Control Simulation On A Fixed Population**

- Created a 2D Simulation of a dynamically behaved population undergoing a pandemic with a heavy use of inheritance and polymorphism with C++.
- Added real-time visualization with QT Creator graphical libraries.

## **Visualization Of Dijkstra's Algorithm On Customizable Maps With Gui And Storage Implementation**

- Designed and coded a real-time visualization of Dijkstra's path-finding algorithm on a user-made nodes map.
- Created an intuitive and reactive GUI with C++ QT Creator GUI libraries.
- Implemented a save/load system to store user's custom-made map.

## **Sudoku Solver With Multithread Integration**

- Sudoku Solver using Depth-First Search method. The project applied various complex data structure for fast look up time, and performance optimization. Currently integrating multithread for faster permutation traversal.

## **Reverse Polish Calculator With Antlr Integration**

- Applied ANTLR (Another Tool for Language Recognition) as a parser. Use context-free grammar to break down infix expression into postfix expression. Use Gradle as a Java build tool.
- Added multi-system capabilities with Gradle as build tool and Java as language.

## **Experience**

### **Motion Graphic Designer/ Graphic Designer**

Edmonds College, Wa 2021 - 2023

- Designed and led advertisement campaigns of student, faculty, and local events in the community using Adobe Illustrator, Photoshop, and After Effect.

### **Newsletter Editor On Graphic Designer/ Graphic Designer**

Edmonds College, Wa 2023 - 2024

- Designed and edited newsletters for the Computer Science Department, and Computer Science Advisory Board