

ETHAN ALVIZO

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EXPERIENCE

Software Developer

Jan. 2023 – Current

Tangam Systems

Waterloo, ON

- Building data visualization software for casinos to optimize profits and player experience using **Angular** and **D3**
- Improving upon user experience and application visibility of legacy **ASP.NET** product with **C#** and **SQL** patches

Front-End & Game Developer

Mar. 2022 – Aug. 2022

AI Arena

Toronto, ON

- Developed responsive UIs for the NFT marketplace and locker room in a Web3 fighting game using **React** and **D3**
- Created interactive landing pages with 3D components using **Three.js** and **Blender**, boosting conversion rate by 20%
- Formed visually engaging loading animations using custom **WebGL** and **GLSL** shaders, enhancing game immersion

Front-End Engineer

Sept. 2021 – Dec. 2021

VTS

Toronto, ON

- Revamped UI for room bookings in commercial properties using **React**, **TypeScript**, **Material-UI**, and **GraphQL**
- Implemented reusable blocks for a no-code builder using **React Native**, increasing options by 20% on **iOS** and **Android**
- Devised 30+ unit tests with blackbox and whitebox approaches using **Jest**, expanding test coverage by 25%

Full-Stack Developer

Jan. 2021 – Apr. 2021

Betterworth

Waterloo, ON

- Built financial advisor platform using **MongoDB**, **Express**, **React**, and **Node**, improving client retention and satisfaction
- Optimized email invite sign-up flow using **JWT** to save and auto-fill client information, reducing clicks by 75%
- Automated the deployment of platform copywrite using the **Google Drive API**, accelerating the release cycle by 25x

Software Developer

May 2020 – Oct. 2020

IntelliCulture

Waterloo, ON

- Developed equipment maintenance dashboard using **HTML/CSS** and **JavaScript**, reducing repair costs by \$10,000/year
- Created responsive product portal for investors using **Bootstrap**, boosting annual recurring revenue by \$200,000

EXTRACURRICULARS

Project Developer

Sept. 2022 – Dec. 2022

UW Blueprint

Waterloo, ON

- Developed **RESTful API** endpoints using **TypeScript**, **PostgreSQL**, **Express**, and **Node** for a non-profit organization
- Tested **HTTP Requests** for role-specific features using **Postman** and simulated production environment with **Docker**
- Collaborated with UI/UX designers to implement **Figma** mockups using **ChakraUI**, ensuring 100% responsiveness

PROJECTS

VR Playground | *Unity, Oculus Quest, XR Interaction Toolkit*

 [Code](#) |  [Demo](#)

- Created 3D world in **Unity** to experiment with **VR** game mechanics using the **XR Interaction Toolkit** and **Oculus Quest**
- Implemented headset tracking, controller input, hand animations, grabbable objects, projectiles, and user interfaces

Grocery Assistant | *React Native, AWS (Amplify, Cognito, and DynamoDB)*

 [Code](#)

- Built mobile app to keep inventory and track expiry dates using **React Native** and **AWS** (Amplify, Cognito, DynamoDB)

Hand Gesture Detector | *Python, Arduino, Matplotlib*

 [Code](#) |  [Demo](#)

- Detected hand position using **Arduino** ultrasound module to measure distance and produced a heat map using **Python**

TECHNICAL SKILLS

Languages: HTML5/CSS3, JavaScript/TypeScript, Python, C#, SQL (Postgres), GraphQL, WebGL

Technologies: React, React Native, Angular, Jest, Node.js, Express.js, MongoDB, Three.js, D3.js, REST, AWS

Developer Tools: Git, VS Code, Xcode, Android Studio, Docker, Postman, Jira, Figma, Blender, Unity, Quest

EDUCATION

University of Waterloo

Sept. 2019 – Apr. 2024

BASc in Biomedical Engineering (Software Engineering Option)

GPA: 3.84/4.0

Courses: Data Structures & Algorithms, Digital Computation, Human Factors in Design, Prototyping & Simulation