

Cheng Zeng

ASPIRING ARTISTIC ENGINEER

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Education

University of Waterloo

2024 - Present

Bachelor of Computer Science

Waterloo, ON

Courses: Data Structures & Algorithms, Digital Computers & Systems, Systems Programming & Concurrency

Technical Skills

Languages: Java, JavaScript, HTML/CSS, Python, GdScript, TypeScript, C#, C++

Library/Frameworks/Database: React, MongoDB, Vite, Express.js, Node.js, Tailwind CSS, Next.js

Tools: Git, GitHub, Figma, Stable Diffusion, Google Cloud Platform, Android Studio, Adobe Suite

Experience

Game Developer - Game Systems Team

May. 2023 – Jan. 2024

The Mathetia

Richmond, BC

- Created a detailed solo Godot game project, developing an intricate narrative with **15,000+** characters in plot, **50+** pages of business plans and character designs, resulting in **10,000+** views on cross-platform marketing accounts.
- Innovated card display algorithms with **custom content generation** using **multi-layered tween system** to display of **54+** unique cards with adjustable transparency.
- Utilized **ConfigFile** for efficient dialogue data management, supporting easy content localization, and theoretically **unlimited dialogue logs**.

Software Engineering Intern - Android App Development Team

Oct. 2022 – May. 2023

Game of Apps

Richmond, BC

- Utilized Android Studio to create a robust **form validation system** in the survey fragment to verify content, provide immediate user feedback and enhance data accuracy.
- Added text watchers to the search bar, enabling **real-time filtering** of the recycling station list based on user input, improving search efficiency and user satisfaction by **50%**.
- Created a recycling station adapter with extensions to efficiently display a list of **15+ unique recycling stations** with custom layouts.

Projects

☞ WhatIAM — Personal Portfolio Website | *React, Express.js, Node.js, HTML, CSS, Javascript, MongoDB, Tailwind CSS, Vite*

- Implemented a robust server-side architecture using **Express.js** and **MongoDB Atlas** with real-time validation, error handling, and success feedback, enhancing **CI/CD workflows**.
- Employed **tailwind CSS** and **custom keyframes** to ensure **responsive web design**.
- Created a visually appealing and interactive user interface using **react-powerglitch** and **AOS** libraries with enhanced animations.

☞ StreamOfMe — Cheng Zeng's Blog Website | *React, Express.js, Node.js, HTML, CSS, Javascript, MongoDB*

- Designed and implemented **RESTful APIs** that handle various endpoints for music tracks, blog articles and quotes, supporting **CRUD operations** and efficient data management.
- Integrated **CORS middleware** to ensure secure cross-origin resource sharing, and employed **JSON file-based** data storage for resources, demonstrating proficiency in file system operations and data serialization.

☞ Android-Pack — Portfolio of back-end implementations | *Java, Android Studio, Kotlin*

- Implemented **object-oriented programming principles** and **design patterns** in a question bank application to enhance code maintainability, handling over **500 questions** across **5 grade levels**.
- Used **secure random algorithms** to ensure a unique game experience for each user and increase replay value.

Achievements

University of Waterloo Faculty of Mathematics Entrance Scholarships: - \$2,000 for applicants with 95+ average.

Hugh McRoberts Secondary International Scholarship Award: - Worth \$500 in total.

Hugh McRoberts Secondary Grade 12 Top Academic Award: - Among 1,000+ students.

Canadian Senior Mathematics Contest: - Top 3.4% among 13372 applicants.

Canadian Computer Competition Senior: - Top 19.5% among 3947 applicants.