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: React, Vite, 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, Vite, Node.js, Javascript, Tailwind CSS*
- Developed a dynamic portfolio website using React, integrating tools including advanced libraries such as **react-powerglitch** and **splitting** to enhance visual effects and interactivity of UI elements.
- Implemented a **responsive design** with tailwind CSS and custom CSS animations, showcasing efficiency in modern front-end development.

🔗 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.

🔗 X-toolkit — Toolkit of front-end applications | *HTML, CSS, Javascript, React*
- Created interactive applications using **DOM manipulation and event listeners**.
- Engineered an expense tracking system, utilizing **component-based** architecture and **props** to manage data flow.

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 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.