

# Cheng Zeng

## ASPIRING ARTISTIC ENGINEER

☎ 236-965-7800 | ✉ [c46zeng@uwaterloo.ca](mailto:c46zeng@uwaterloo.ca) | 💻 [linkedIn.com/in/cz5/](https://www.linkedin.com/in/cz5/) | 🐙 [github.com/ch3ngZ](https://github.com/ch3ngZ)

### 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*

- Implemented **modern React hooks** and a **modular component-based architecture** to manage state and lifecycle methods, promote code reusability and maintainability, and enable seamless updates of the application.
- Employed utility classes from **Tailwind CSS** and **custom keyframes** to ensure the website was **fully responsive**, adapting to various devices and screen sizes
- Integrated a variety of external libraries to enhance **dynamic user interface** including **react-powerglitch** for glitch effects and **AOS** for scroll animations.

#### 🔗 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.