Cheng Zeng
Aspiring Software Developer

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Education

University of Waterloo   **2024 - 2029**
Bachelor of Computer Science   *Waterloo, ON*

Courses: Algorithm Design & Data Abstraction, Tools & Techniques for Software Development, Object-Oriented Software Development, Logic & Computation

Technical Skills

Languages: JavaScript, Java, Python, TypeScript, C, C#, C++, HTML/CSS, DrRacket, GdScript
Library/Frameworks/Database: Next.js, React, Tailwind CSS, Bootstrap, Node.js, Express.js, MongoDB, MySQL, Vue, Flask, Django, Springboot
Tools: Git, GitHub, Vite, Vercel, Heroku, Netlify, AWS, Postman, Figma, Stable Diffusion, ComfyUI, 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 **fully customized content generation** using **multi-layered tween system** to display of **54+** unique cards with adjustable transparency.
- Utilized **configuration files** 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*

- Developed an Android app providing **recycling-related information**, with categorized details for different types of recyclables, improving user understanding of recycling processes by **33%**.
- Implemented a search bar with **Google Maps integration** for users to locate and view **15+** local recycling stations in real time, enhancing the app's UI consistency and information accessibility.
- Built a **form validation and submission system** to verify user inputs, ensure data accuracy and immediate feedback.

Projects

🔗 WhatIAM — Personal Portfolio Website | *React, TailwindCSS, Boostrap, Express.js, Node.js, MongoDB, Vercel*

- Created a personal portfolio and blog website with **highly interactive animations**, integrated **React.js and TailwindCSS** for **responsive design** and a **information collection system**, which enhances the efficiency of **retrieving data by 50%**.
- Dynamically rendered pages based on **Express.js and MongoDB**, integrated **Vercel Blob** for static asset storage, and **RESTful APIs** to support **CRUD operations** for music tracks, blog articles, and quotes.

🔗 Timeless — Hack the North 2024 Participant | *React, TailwindCSS, Flask, JavaScript, Python, MongoDB, Postman*

- Developed an AI-powered app that generates **fully personalized audio-visual experiences** with cutting-edge AI models such as **Cohere, Groq, DALL-E 3, Suno and Luma AI**.
- Used **Lucide** libraries to enhance visual appeal, **Python Flask** as the backend, Postman to create **RESTful APIs with Axios** for robust connection between **client and server sides**, and **MongoDB Atlas** for database management.
- Overcame challenges in **multiple AI model pipelines optimization** by refining **CI/CD workflows** and experimenting with **prompt engineering** to ensure efficient use of resources and accurate results in real-time.

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.