Zhijie Xia

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EDUCATION

University of Calgary, AB — Jul 2019 - Present
Bachelor of Science in **Computer Science** (Honours) — **GPA: 3.94/4.0**

EXPERIENCE

University of Calgary - Programmable Reality Lab — April 2022 - Present
Mixed Reality Developer & Undergraduate Researcher — Calgary, Canada
- Submitted to **ACM CHI 2023** as first author.
- Created **Reality Canvas** (sponsored by Adobe) - a real-time scribble animation authoring tool.
- Research in the area of Mixed Reality(AR/VR).

University of Calgary - Rella Cambian Dream Team — November 2022 - December 2022
Mixed Reality Developer — Calgary, Canada
- Collaborated with the original **Rella Cambian Dream** Team.
- Bring immersive viewing experience to audience by **developing AR technologies**.

PROJECTS

Reality Canvas — April 2022 - Present
Real-time Authoring Tool sponsored by Adobe
- The system allows users to create scribble animations with ease. Users can draw the animation and apply the animation in real-time.
- The object/body tracking is based on **MediaPipe**, and drawing animation is applied using **OpenCV**.

Your Store — Jan 2022 - April 2022
E-Commerce Website
- An online shopping site. Buyers/Sellers can register on the site and purchase/list products.
- The website's frontend is built by **React**, and the backend is built by **Express** and uses **MongoDB** as the database.

Mini C Compiler — Dec 2021 - March 2022
Yet Another C Compiler
- A compiler takes augmented C source code, outputs **MIPS-32** assembly, and runs in a simulator.
- Use **Flex&Bison** for frontend(lexer, parser) and self-written **MIPS-32** assembly code generator as backend.

Other Projects
- **DevBlog** : My personal blog site written with **MERN** - www.zhijiexia.dev.
- **Blockchain** : A simplified implementation of **Bitcoin Core** in Go.

AWARDS

Intl.Undergraduate Award	University of Calgary Scholarship	2020,2022
Owen Family Scholarship	University of Calgary Scholarship	2021
Dean's List	Faculty of Science Dean's List	2020,2022

TECHNICAL SKILLS

Programming languages: C++, C, Go, Rust, Python, Haskell
Web Development: HTML, CSS, JavaScript, Tailwind, Bootstrap, React, Express

Databases: MySQL, MongoDB, SQLite
DevOps: Linux, Git, Bash, Zsh, Docker

SOFT SKILLS

Collaboration: Successfully completed multiple team projects, with extensive experience collaborating in a research lab. Proven ability to work well in teams and adapt to different group dynamics. Strong interpersonal and communication skills.

Active Learning: Passion for exploring and learning about new technologies, such as blockchain, machine learning, and mixed reality. Attendance at leading c onferences in the fields of cybersecurity and human-computer interaction, including NDSS, USENIX, IEEE S&P, UIST, and ACM SIGCHI.

Critical Thinking: Proven ability to conduct independent research on emerging technologies, such as blockchain and mixed reality. Strong critical thinking skills, with a track record of using analytical and problem-solving skills to arrive at innovative solutions.

RELEVANT COURSEWORK

Computer Science: Information Security, Compiler Design, Data Structures and Algorithms, Databases, Operating Systems, Computer Networks, Software Engineering
Mathematics: Optimization, Discrete Maths, Probability Theory, Number Theory, Linear Algebra, Advanced Calculus