





# Zhijie Xia

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## EDUCATION

### University of Calgary, AB

Jul 2019 - Present

Bachelor of Science in **Computer Science** (Honours)

**GPA: 3.95/4.0**

## EXPERIENCE

### Knowd Inc.

Software Engineer Co-op

June 2023 - Present

Toronto, ON

- Developed automated solutions for efficient information sharing, insights discovery, and knowledge flows.
- Utilized the following technologies: **React**, **Tailwind**, **NextJS**, **Prisma**, **Postgres**, and **Supabase**.

### Programmable Reality Lab

Mixed Reality Developer & Undergraduate Researcher

April 2022 - Present

Calgary, AB

- Accepted at **UIST 2023** (Fairmont San Francisco, California USA) 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).

## 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](http://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, Java, JavaScript, Go, Rust, Python, Haskell

**Databases:** MySQL, MongoDB, SQLite, Supabase, Prisma

**Web Development:** Tailwind, Bootstrap, React, Express, NextJS

**DevOps:** Linux, Git, Bash, Zsh, Docker, Nginx

## 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 conferences 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