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

Lucid Vision Labs ⬀ — September 2023 - Present
Firmware Developer Co-op — Richmond, BC
- Firmware Developer driving the advancement of state-of-the-art **vision cameras** by spearheading innovative solutions in digital imaging technology.
- **Researching** and **developing** at the intersection of hardware and software to drive the evolution of vision technology for **computer graphics**.

Knowd AI ⬀ — June 2023 - August 2023
Full-stack Developer Internship — 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 ⬀ — April 2022 - Present
Mixed Reality Developer & Undergraduate Researcher — 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 leveraging **machine learning** and **computer graphics**.
- 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.
- **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

Auxiliary: Linux, Git, Bash, Zsh, Docker, Nginx, Tensorflow

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