

Daniel Chen

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SKILLS

Languages: HTML/CSS/JavaScript/TypeScript, Python, Bash, C++, Java, Dart, SQL, Rust

Frameworks: Node.js, React, Next.js, Vue 2/3, Nuxt.js, Flutter, Electron, Qt, FastAPI, TailwindCSS, VirtualBox, Sass

Tools: Linux, Git, Android, Docker, MyPy, WebSockets, Figma, Selenium, Poetry, Pillow, Pytest, Vuex, Pinia

EXPERIENCE

Software Developer

2022 – present

UW Orbital Engineering Design Team

Waterloo, ON

- Implemented the light service and an event queue for a real-time OS based on ambient light changes

General Executive

2021 – 2022

Bayview Computer Club

Richmond Hill, ON

- Administered the club server to host club events, member accounts / websites, and activities
- Planned and implemented biweekly lessons to raise awareness of popular and niche topics such as emulation
- Ran the annual self-hosted school-wide competitive programming contest, designing fair but challenging problems

GITHUB PROJECTS

Mandown | *Python, MyPy, Pytest, Qt, Typer, Poetry*

2022 – present

- Created a real-time site scraper for metadata and images to automatically download comics
- Implemented comic conversion between CBZ/EPUB/PDF as well as image processing to optimise for e-ink screens
- Increased download and update speed by more than 100% by implementing image caching and multiprocessing
- Designed a responsive and accessible CLI with Typer and GUI with Qt 6
- Wrote extensive unit tests to minimise regressions between release cycles

"Pillow" Water Quality Sensor | *Rust, STM32*

2022

- Created a water quality statistics aggregator and visualiser on an embedded platform in safe Rust
- Engineered an embedded system with a STM32 microcontroller, matrix keypad, and an LCD display

Resketch | *TypeScript, React, Next.js, WebSockets, Node.js, Figma, Google Cloud, TailwindCSS*

2022

- Developed a homegrown API backend to authenticate users and to create game rooms
- Utilised Google Cloud APIs in real time to evaluate user drawing accuracy and award points

Primoprod | *TypeScript, Vue, Vuex, Electron, Android*

2021

- Mocked a video game UI using CSS to create a hyper-realistic, cross-platform game simulator
- Reverse-engineered an API to allow Primoprod to interoperate with a popular web service (paimon.moe)

RecipeReady | *Dart, Flutter, Selenium, FastAPI, Android*

2021

- Scraped thousands of websites for recipes to build a database with a robust many-to-many tag system
- Designed a REST API to filter and query recipes along with ingredient pricing from Walmart

AWARDS

- Winner of the EdTech category at StormHacks 2022
- Winner of the IBM Open Source category at YRHacks 2022
- 2nd place in the Industry 4.0 engineering analytics contest

EDUCATION

University of Waterloo

2022 – present

Candidate for B.A.Sc. in Computer Engineering

Waterloo, ON

- Secretary, Creative Writing Club

Bayview Secondary School

2018 – 2022

IB Diploma and OSSD Diploma

Richmond Hill, ON