

# Elysia Wang

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## Education

**University of Waterloo**, *Pure Math, Combinatorics & Optimization, Computer Science*  
Candidate for Bachelor of Mathematics

Sept 2020 – Dec 2025

- Relevant Coursework: Object-Oriented Programming (C++), Algorithm Design and Data Abstraction (C)

**University of Copenhagen** (*Exchange Program*)

Sept 2022 – Jan 2023

- Relevant Coursework: Advanced Algorithms and Data Structures (Masters Level), Introduction to Quantum Computing

## Experience

**Microsoft**, Software Engineer

May 2024 – Jul 2024

- Spearheaded the end-to-end migration of our performance reports to a [Databricks Python notebook and dashboard](#), reducing the overall amount of stored data by **20%** and allowing reports to be generated **3x faster**.
- Added dashboard filters to customize the reports, allowing the performance bottleneck cause to be identified **5x quicker**.
- Designed and implemented new telemetry events in [C++](#) to provide the required data for the performance reports, which are now used by all engineering teams across the studio.

**Wealthsimple**, Software Engineer

Sept 2023 – Dec 2023

- Implemented retirement accounts (LIF and RRIF) and their respective validations using [Ruby](#) to increase client retention, preventing a loss of an estimated **170+ high-value clients annually**.
- Scoped and executed a project to deprecate an outdated service, shortening the timelines of approximately **5500** internal transfers of assets per day by up to **2 days**.
- Updated a [PostgreSQL](#) database and [GraphQL](#) queries to store and fetch account valuations, resulting in a **35% increase** in accuracy of transfers.

**OpenText**, Software Engineer

Feb 2023 – Apr 2023

- Designed and developed a [Java](#) command line tool with [PicoCLI](#) that assesses the quality of the search service by analyzing over **174,000** data files to evaluate precision & recall, and creates a summary of the result.
- Presented and analyzed the results, deriving actionable steps for improvement which lead to a **3x increase** in search quality across 8 languages.
- Automated the process of collecting **18,000+** article files in 18 languages to train NLP models using [Python](#), increasing model accuracy by **25%**.

**PlayStation**, Software Developer in Test

Jan 2022 – Apr 2022

- Automated end-to-end tests using [Pytest](#) scripts and [qTest](#) for PlayStation's subscription service, increasing testing speed by **100%** and improving performance for **48 million users** worldwide.
- Monitored project health and maintained a test suite of **200+** test scripts using [Jenkins](#) to alert the PlayStation 5 (PS5) store team of application and test script bugs.
- Won **1st Prize** in the global company-wide hackathon with a [patent-pending app](#) for the PS5 made with [React Native](#) and [TypeScript](#).

## Projects

**Receive Receipt** (TOHacks), [SQL](#), [Python](#), [CockroachDB](#)

- Created a backend system to manage retail receipts by emailing them to customers to save paper and reduce contact during the COVID-19 pandemic

## Technologies

**Languages:** Python, C++, Ruby, Java, C, SQL, JavaScript, Bash, Typescript, HTML, CSS, R

**Technologies:** Git, GraphQL, DataDog, React Native, Rollbar, Preset, Sidekiq, Azure, Pytest, Databricks, Jenkins, Solr, Cucumber, PicoCLI, Fortify