# Dylan Dai

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#### **EDUCATION**

University of Waterloo

Candidate Bachelor of Computer Science

Faculty Average: 85%

Relevant coursework: Compilers, Advanced Functional Programming, Abstract Algebra, Calculus I

WORK EXPERIENCE

## Senior Data Quality Specialist - Developer | Python, C++, Java, JS

Toronto, Ontario

Waterloo, Ontario

Expected: April 2028

August 2024 - Present

- Annotated and corrected over 700 coding test sets for evaluating the quality and accuracy of LLM-generated code
- Reviewed the quality and correctness of over 300 coding test sets from other senior annotators
- Used BeautifulSoup and Pandas to webscrape and format programming problems to increase work efficiency by over 300%
- Created and annotated over 5 mini-projects, including automated word-game solvers, and a digit detection model

#### PROJECTS

Music Tracking Game (Devpost) | MATLAB, Flask, HTML, CSS, JavaScript

June 2024

- Won Best use of MATLAB from 200+ participants by developing a musical accuracy tracking game
- Implemented **cross-correlation** to compare two audio waves by extracting two vectors of amplitudes
- Tracked musical accuracy by adjusting lag from both audio waves, giving feedback every 50 milliseconds
- Deployed an interactive web platform to retrieve and display game information in real time

Image Detecting Waste Sorter (Devpost) | Google Cloud, Hugging Face, Flask, JavaScript, Python, React Native May 2023

- Made an application built with React Native to identify and sort waste using a camera for object detection with 90% accuracy
- Used Google Cloud's Vision AI for object detection and classification to send to manually parsed waste database with JS
- Combined embeddings with a 384 dimensional dense vector space using AI model all-MiniLM-L6-v2
- Sent response data and associated weights to the **REST API** of the **Flask backend** to identify disposal strategies

Voice Automated Assistant (Github) | Cohere, Whisper, Python, TKinter

May 2023

- Made an AI-driven tool that interprets voice input using Whisper into computer commands
- Implemented voice-to-text transcription to send information to Cohere's API to categorize the command
- Used Google Cloud search API for web search, and implemented Python keyboard and mouse macros to execute commands

## AWARDS

## Canadian Computing Olympiad | Bronze Medalist

May 2024

- Placed 14th out of 4000+ participants in national-level computing competition, invited to Canada's team selection invitational
- Solved algorithmic problems using data structures, graph theory, and combinatorics in C++

### **Math Contests**

- Placed in the 97th percentile in UWaterloo's Euclid Contest (27650 participants) | Distinction Award

April 2024

- Placed in the 99th percentile in UWaterloo's Senior Mathematics Contest (16805 participants) | Honour Roll November 2023
- Placed in the 99th percentile in UWaterloo's Hypatia Contest (7816 participants) | Honour Roll

April 2023

## EXTRACURRICULARS

#### General Member

The Prefects Charity Organization

October 2021 - June 2024

- Guided and collaborated with  $\sim 30$  people to raise  $\sim \$10,000$  of profit annually for charitable organizations
- Represented the school by leading and executing over 25 events such as bake sales, student socials, etc

#### SKILLS

Languages: Python, C++, C, Java, JS, TypeScript, Racket, Clojure, HTML, CSS

Technologies: Git, React, React Native, Flask, GCP

Libraries: NumPy, Pandas, BeautifulSoup, MATLAB, Whisper, TKinter