# **Justin Matthew Wong**

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## Skills

Languages: C, C++, Python, Java, HTML, CSS, JavaScript

Platforms: Windows, Linux (Ubuntu)

Proficiency in algorithms and data structures.

## Education

**BS** University of Toronto, Computer Science

Sept 2023 – Present

- Cumulative GPA: 3.98/4.0
- **Coursework:** Software Development and Programming, Algorithm and Theory, Computer Architecture

## Honors & Awards \_\_\_\_\_

2025 ICPC North America Championship, 13th Place

• Advanced to the ICPC World Finals Baku in September 2025

2023 Canadian Computing Olympiad, Bronze Medal

• Invited to the University of Waterloo as one of the top 30 high school contestants nationwide.

## Extracurricular Activities \_\_\_\_\_

#### **University of Toronto ICPC Team**

Department of Computer Science, University of Toronto

Sept 2023 - Present

## Research / Personal Projects \_\_\_\_\_

Personal Webserver G it is a Github Repo

**Technologies:** C++, HTML/CSS, Nginx, System Programming, Linux

- Developed a lightweight web server in C++ using low-level system programming to serve static HTML/CSS content.
- Designed and deployed a personal website hosted via the custom C++ server.
- Configured Nginx as a reverse proxy to handle HTTPS connections.

### Pseudo-polynomial Algorithms for Length-bounded Integral Multicommodity Flow

- Investigated and developed solutions for the length-bounded integral multicommodity flow problem.
- Proved that the general problem is NP-hard by using a reduction from 3SAT
- For series-parallel graphs, designed a pseudo-polynomial dynamic programming solution based on decomposition graphs, providing exact results and proving its optimality
- Implemented heuristic algorithms in C++, including simulated annealing, achieving over 80% accuracy based on empirical results

S.T. Yau High School Science
Award
Final Paper