

Shane Chen

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EDUCATION

University of Waterloo

Bachelor of Computer Science, Honours, Co-op

Waterloo, ON

September 2024 - Present

- Excellent Standing - 3.98/4.0 Cumulative GPA

SKILLS

Languages: Python, Java, C, C++, JavaScript, Typescript, HTML, CSS, SQL, Powershell, Bash

Technologies and Frameworks: React, Git, Django, Pandas, Node.js, MongoDB, GraphQL, Postman

Productivity and Design Tools: Jupyter Notebook, Microsoft Office 365, Canva, LaTeX, LLM

EXPERIENCE

Project Metropolis

Lead Mobile Developer

Toronto, ON

December 2021 - July 2024

- Led a team of five to design, develop, and maintain a production-grade cross-platform mobile app using React Native, delivering a seamless user experience on both iOS and Android
- Optimized CI/CD pipelines using Git and Expo, streamlining deployment and scaling the app to **800+** users
- Designed and implemented a dynamic event calendar with push notifications using React and CSS, integrating scheduled events and descriptions from a Django REST API

Mackenzie Computer Programming Team

President

Toronto, ON

September 2023 - June 2024

- Maintained and administrated mcpt.ca, an online judge built on Django with **1400+** users
- Authored **30+** structured problems with test cases and detailed solutions in Java, Python, and C++, collaborating with curriculum leaders to teach core computer science principles
- Hosted **6** programming contests with **100+** participants, providing preparation for national-level competitions

ACHIEVEMENTS

Mathematics National Scholarship

University of Waterloo

Waterloo, ON

May 2024

- One of 10 recipients of a **\$12,000** scholarship awarded for exceptional academic performance, extracurricular involvement, and outstanding results in national math contests and the Canadian Computing Competition

CyberPatriot Finalist

Cybersecurity Competition

Remote/Toronto, ON

October - May 2024

- Placed **99th** percentile in CyberPatriot's semifinal, securing a top-5 placement in the Canadian finals
- Used Windows SCCM to secure Active Directory and Windows workstations connected to the domain
- Created Bash scripts to automate security and policy checks, boosting competition performance by **20%**

PROJECTS

matchmadein.tech - Most Creative Use of Github at Hack the North X

Matching users with others on Github who share similar commit frequencies and language familiarity

- Optimized Github API data queries using GraphQL, allowing querying up to **100,000** users per hour
- Implemented a user-matching API using K-means clustering through Scikit and Python Flask

Faceoffantasy

A Custom NHL playoff fantasy platform

- Enabled user-created fantasy leagues stored with MongoDB, utilizing UUIDs to ensure controlled invitations
- Developed configurable points and ranking systems using JavaScript to enhance league customization

PANIK - Computer Science Final Project

A video game designed to educate people on social anxiety

- Used object-oriented programming to organize game components and support the game loop with Java
- Enhanced the user interface with custom graphics, implemented through JavaFX