



# Chris Chen

## Programmer

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 [cchryx.github.io](https://cchryx.github.io)

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## SKILLS

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**Programming Languages:** Javascript, Java, HTML, CSS, Python, PHP

**Libraries/Frameworks:** React.js, Express.js, Node.js, OpenCV, TensorFlow, Discord.js

**Other:** AWS, Github (Git), OnShape, Aurdino, Postman, Heroku, MongoDB

## PROJECTS

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**Personal Website**- React.js, Javascript, HTML, CSS

July 2024

- Built a personal website with React.js, HTML and CSS

**Competitive Robot (PLUTO)** - Java, Mechanical Design & Manufacturing, TensorFlow, OpenCV

July 2023 - April 2024

- Played a key role as the robot programmer and builder for Team 19498 Devolotics to place **#2 in Ontario** for the **FIRST Tech Challenge**. Then competed at Houston, Texas 2024 World Championships.
- Wrote autonomous programs that integrated 6 different sensors, 8 motors, 10 servos, object tracking with **OpenCV** and **TensorFlow**, robot pathing with the Roadrunner library, and precise motor control with **PID controllers**.
- Developed three robot iterations designed in the 3D modeling software Onshape, using machined aluminum, PLA, PETG, and polycarbonate.

**Story of Starboy RPG**- Python, Pygame

June 2024

- Created a catcher game using Pygame; implemented the dropping and collection of stars, a fuel handling system, an HP management system for both player and boss, and a mechanic allowing the player to shoot light pulses to defeat bosses.

**Bicopter** - Aurdino

January 2024

- Developed a dual-propeller helicopter utilizing two brushless motors paired with ESCs, two servos, an Arduino UNO, and a GY-521 MPU-6050 (3-axis gyroscope and accelerometer) for stabilization during flight.

**Xenon Economy (Discord Bot)** - Node.js, Discord.js, MongoDB, Heroku

June 2022 - September 2022

- Developed an economy bot using the Discord.js library, featuring 100 commands and over 60 types of items with various uses. The bot reached 100 servers, with over 400 accounts created and 1,000+ daily interactions.
- Implemented cloud-based web hosting on Heroku and utilized MongoDB, leveraging its flexible schema and powerful query capabilities to design and manage robust, scalable databases for handling the immense amount of user interactions.

## LEADERSHIP

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**Scarborough STEM Alliance** - Non-profit, Operations Executive, Volunteer Co-Ordinator

- Developed and implemented lesson plans, and managed volunteer training to facilitate Python/EV3 workshops for over 500 students.
- Partnered with 25+ TDSB schools, libraries, and City of Toronto summer camps to deliver engaging coding and robotics programs, inspiring and empowering youth across the city.

## EDUCATION

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**Dr. Norman Bethune Collegiate Institute**

2021-2024

- Bethune Scholar (>90%, GR. 11); Top 6 Average: 97.3%; All course Average: 96.3%