

# Tianyu Wu

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## EDUCATION

- **The Ohio State University** Columbus, OH  
Bachelor of Science in Computer Information Science; GPA: 3.85 Aug 2019 - December 2023 (Expected)

## SKILLS SUMMARY

- **Languages** Java, Ruby, C, Python, SQL
- **Framework** React, Pytorch, Horovod
- **Tools** Docker, GIT, Nginx
- **Others** HPC, Slurm Cluster, Linux, Mvapi2

## RESEARCH EXPERIENCE

- **Buckeye Auto-drive Team** Columbus, OH  
*Team Captain: Javier E. Fernandez; Group Leader: Daniel Pan* August 2022 - Current
  - **Co-leader Of Perception Group:** Convert the data format collected by other teams into BDD format and integrate it with the COCO dataset. Train the YOLOP model at OSC (Ohio Supercomputer Center) using the given data. Accelerate the computational speed of the model on cpu through the OpenVino framework
- **Mini-program Regulations Vulnerability** Columbus, OH  
*Project Leader: Professor Zhiqiang Lin; Supervisor: Dr. Yue Zhang (Postdoc at OSU)* Apr 2022 - August 2022
  - **Undergraduate Research Assistant:** Looking for a way to bypass app store regulation with a built-in interpreter and trying to find a strategy to fix this vulnerability. Have collected 420,000 applets through tools. Currently decoding the collected data and identifying samples by scanning for features.

## ACADEMIC PROJECTS

- **Interpreter Based On Java (Highest Score in the Class)**  
An interpreted language implemented by Professor Mike Bond. Used the Jflex and Cup libraries of java to implement parsing and rendering functions. The language's syntax is Turing-complete, and in addition to that, the interpreter implements multi-threaded operation and memory recycling. Optimized the logic of the multi-threaded deadlock implementation in the architecture designed by my professor, and used ConcurrentHashMap to prevent multi-threaded I/O conflicts
- **Grader Hiring System For OSU CSE Department(Highest Score in the Class)**  
Led a project constructing a dynamic page based on ruby on rails and contributed close to half of the core code in the group. The system can scrape all the CSE courses in the school department through a public api interface. There are three accounts with different permissions on this site. Used Sqlite to store or access all the data and deployed it on the server via Nginx
- **Multi-threaded Web Chat Room (Full Marks)**  
Used Python for user client, and Java for server client, based on TCP Protocol. In charge of designing and implementing the client side of the server. Also implemented group messaging and querying server history messages. In addition to that, this chat room supports creating private chat rooms and selecting specific users for broadcasting.
- **Set Game (Highest Score in the Class)**  
Written based on the rules of the set game on Wikipedia. In charge of the group leader and deployed the project on my server. Contributed the bot player module that makes decisions based on random numbers and a lot of core code in this project. In addition, this game also supports difficulty selection through different shuffle logic. The game has a web version and a desktop implementation with ruby's shoes library. With the Jruby compiler, this game can run on all JVM-enabled devices

## LANGUAGE

- English (Fluent), Mandarin (Native)

## HONORS AND AWARDS

- First Robot Competition Silver Medal with Team 5449 China, 2018
- Student Dean's Lists for Academic Excellence OSU, 2020,2021,2022