Chao-Wei Tu

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EDUCATION

Bachelor of Science, Computer Science | Minor in Statistics **Expected May 2023**

University of Maryland, College Park, MD

SKILLS

Programming Languages: C, Java, Python, Ruby, R, Matlab, OCaml, Rust, HTML, CSS, JavaScript, PHP

Other Skills: web development, Robotics, 3D modeling, soldering, electronic circuit design, Algorithm

Tools: VScode, Arduino, Git, PhpMyAdmin, Fritzing, Tinkercad

Speaking Languages: **English** – professional working proficiency, **Mandarin**(Chinese) – Native

EXPERIENCES

Personal Project

"Bookmark Switcher" Firefox Extension (github.com/cwtu/bookmark-switcher.git) January 2021 – present

- Writing a Firefox add-on using JavaScript that allows users to change the set of toolbar bookmarks for different purpose to reduce the pain of clicking through folders
- Using asynchronous JS (promises, await, async) to avoid data race when communicating between folders

"Forest Hunter" Java Text-Based Game (github.com/cwtu/forest-hunter.git) November 2018 – January 2019

- Programed a text-based game using Java where user type in commands to control the character
- Used polymorphism and 2d arrays to create objects, rooms, and maps that allows player to move around, pick objects and store them into inventory, and battle with enemy

Intern July 2018 – August 2020

EPI Material Technology Inc. New Taipei, Taiwan

- Designed a responsive, interactive, and multi-layer webpage with intuitive navigation systems using JavaScript
- Developed secured backend interface for authorized users to update website contents using PHP and SQL
- Managed and maintained company's cloud server and email accounts to build a frictionless working environment for more than 10 employees

Exchange Student at National Taiwan University September 2020 – December 2020

Computer Vision I

- Learned basic image processing using NumPy and OpenCV

Introduction to Engineering Design (ENES100) February 2020 – May 2020

Over-Sand Vehicle Project College Park, MD

- Developed program in C for Arduino that controls the vehicle to navigate around obstacles, locate the mission site, extract binary data from the site, and decrypt the data into human readable information
- Designed vehicle parts using Autodesk Inventor, printed 3D models with MakerBot Print, and constructed vehicle

Robotics Competition September 2018 – December 2018

Formosa VEX Turning Point 2018 New Taipei, Taiwan

- Contributed code in C that prevent the robot from rolling over by collecting data from the accelerometer and controlling the motor of the wheels
- Co-built the robot using aluminum frame, steel frame, belt grinder, saw, drill driver, and more
- Instructed the design of robot's base and mechanical arm by using mathematical equations and physical hypothesis