Sydney Tzu-Jung Fang

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SKILLS

- Amazon Web Services, Tensorflow, PyTorch, Machine Learning, Artificial intelligence, SCRUM, Kanban, Python, Java, MySQL, PostgreSQL, HTML, PHP, CSS, Javascript, Git, NLP, VBA, ReactJS, Bootstrap, Blender, Unity, Django, REST
- Linguistic: English, Mandarin, Cantonese, Japanese, Taiwanese, French (limited)

EDUCATION

The University of British Columbia - Double major in **Computer Science** and **Bio-Chemistry** Sep 2018 ~ Jul 2023

RELEVANT WORK EXPERIENCE

Data Analyst | The University of British Columbia - Single molecule Mechanobiology lab Jun 2022 ~ Sep 2022

- **MATLAB** to write scripts and optimize and clean up cell data collected by other biologists and chemists in the lab
- Initiated and lead the migration of codes and database to GitHub - **Git**
- Created a website for the 2022 OKBC conference - **HTML, JS, CSS, ReactJS**

Software Research Assistant | The University of British Columbia Sep 2019 ~ Apr 2020

- Mapped the blueprint of the Okanagan Waterway into 3D interactive environment using **Blender** & **Unity**
- 3D modelled and designed real-time objects into Blender and Unity
- Automated scenes, sequence assembly and repetitive tasks - **Python**

TECHNICAL PROJECTS

Natural Language Processing Researcher |*Supervised Research Project* Jul 2022 ~ Present

- Building a **machine learning** model that tracks and translates human body, hand and face movement gestures into different linguistics using **Tensorflow**, **python** and etc.
- Researching and building a **deep neural network** related to translating minority dialects and body gestures with integrated emotions from limited datasets

Software Engineer Lead | Canadian Space Agency, SEDS - CAN-SBX Oct 2021 ~ Present

https://www.asc-csa.gc.ca/eng/sciences/balloons/campaign-2022.asp

- Winner of the CAN-SBX competition for 2 consecutive years, worked closely with the Canadian Space Agency
- Proposed a solution to reduce the stratospheric radiation effects on single event upsets through hardware and software
- Came up with a solution program that detects and reverses bit flips, and fills planar and SATA SSDs with 0 or 1 - **Java**
- Wrote a program that generates graphical data for statistical analysis - **Python**
- Created a website to document the process and information about our team - **PHP, HTML, CSS, JS, AWS - EC2**
- Planned software testing using **agile** methods to ensure payload would withstand the hostile stratospheric environment

Software Engineer | Competitive coding Hackathon 2022, BC Hacks Nov 25 ~ 27 2022

https://devpost.com/software/parcade

- Led a team of 3, built an interactive game where users can interact with on-screen items through physical movements
- Used opencv and mediapipe to map out and track human body and hand movements - **Python**
- Begin and finished the project from scratch within 48 hours - **HTML, CSS, JS**

Software Engineer | Competitive coding Hackathon 2020, BC Hacks Jan 18 ~ 19 2020

https://devpost.com/software/rumino

- Led a team of 3, built a motile robot that detects the dimensions of a room using an ultrasonic sensor - **Java, Arduino**
- Coded a database and an application that connects to the robot via bluetooth to display the data - **Python, MySQL**