Amy Hu

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☰ Skills

Languages	Java, C/C++, C#, Python, HTML, CSS, JavaScript, Haskell, VHDL, SQL, MATLAB
Frameworks	ASP.NET, Flask, FastAPI, Unity, jQuery, PyTorch, TensorFlow, Swing, Bootstrap, Hexo
Databases	MySQL, PostgreSQL, SQLite, Redis
Tools	Git/GitHub, Docker, LaTeX, IntelliJ Idea, Pycharm, VS/VSCode, SSMS, Railway, Figma

💼 Experience

Present
Jan 2022

Autonomy Team Lead, Waterloo, Waterloo Aerial Robotics Group
- › Leading the autonomy team with 20+ members to deliver software that help UAV derive information from image, video, as well as coordinate inputs, and got **4th place** in AEAC student competition.
- › Overseeing the team in design and develop a graphic interface and data-telemetry system for the drone's ground station using **Figma** and **PyQt5**.
- › Assisted the development of a **YOLOv8** and **PyTorch** based drone landing-pad detection model.
- › Collected custom datasets and accelerated the process of dataset annotation by implementing a **Python** program and modifying a **JavaScript** project to convert dataset labels into YOLOv5/8 format.
- › Implemented a program to classify images using a **deep neural network** in **TensorFlow** to identify 10 different types of object classes.

`Python` `PyTorch` `TensorFlow` `JavaScript` `Figma` `PyQt5`

Apr 2023
Jan 2023

Front-End Developer, North York, Sparklease Inc.
- › Worked with **RESTful API** and **ASP.NET MVC** to develop user uploaded vehicle's detail page in **ASP.NET** and WeChat **MiniApp**.
- › Applied lease/finance monthly payment algorithm to implemented a calculator with various canvas widgets such as a draggable round progress bar.
- › Integrated and enhanced vehicle and user information upload features using **JS** and **AJAX**.
- › Improved the website's **performance** by **60%** and optimized **SEO** by applying **Lazy Load**, eliminating unnecessary codes, enabling text compression, and using crawlable links etc.

`ASP.NET` `MiniApp` `JavaScript` `REST API` `AJAX`

May 2022
Aug 2022

Web Developer, Toronto, eButterfly
- › Developed the 6.0 version of the company's website and admin panel in **React** and finalized the server using **node.js**, features include data listing and data filters etc.
- › Finalized the **swagger documentation** in the company's server.
- › Led a group of five people with another colleague in the e-butterfly lab project by providing helps and advises with the back-end and the environment setup. Self taught **Flask** and **FastAPI** during this.

`React` `node.js` `TypeScript` `Python` `Flask` `FastAPI` `Docker`

Jun 2020
Feb 2020

Curriculum Developer Intern, richmond hill, Hatch Coding
- › Developed games using **JavaScript** and **Python** to teach kids coding.
- › Authored curriculum material on programming fundamentals.

`Python` `JavaScript`

🖥 Projects Find more projects at : 🔗 trotyl.xyz/projects

The MadHouse Adventure Game   Dec 2019 - Jan 2020
⭘ github.com/trotyl15/themadhouse
-Created a graphical interface for an 2D RPG adventure game using **Swing** and developed game logic using **Java OOPs** concept.
-Used **PhotoShop** to create a visually appealing pixel game design and original character sprites.

`Java` `Swing`

Paro-Tennis (Work in Progress)   Apr 2023 - Present
⭘ github.com/trotyl15/paro-tennis
-Familiarized myself with **C#** and **Unity** to create a 2D tennis game with self-drawn background and original characters.
-Applied **Rigidbody Physics** and **Collider** to make the game more realistic and playable.

`Unity` `C#`