








# Amy Hu

 University of Waterloo 2B Computer Engineering

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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, <del>LaTeX</del> , IntelliJ Idea, Pycharm, VS/VSCode, SSMS, Railway, Figma

## EXPERIENCE

Present Jan 2022	<b>Autonomy Team Lead, WATERLOO, Waterloo Aerial Robotics Group</b> <ul style="list-style-type: none"><li>Leading the autonomy team with 20+ members to deliver software that help UAV derive information from image, video, as well as coordinate inputs, and received the <b>perseverance award</b> in AEAC 2023.</li><li>Overseeing the team in design and develop a graphic interface and data-telemetry system for the drone's ground station using <b>Figma</b> and <b>PyQt5</b>.</li><li>Assisted the development of a <b>YOLOv8</b> and <b>PyTorch</b> based drone landing-pad detection model.</li><li>Collected custom datasets and accelerated the process of dataset annotation by implementing a <b>Python</b> program and modifying a <b>JavaScript</b> project to convert dataset labels into YOLOv5/8 format.</li><li>Implemented a program to classify images using a <b>deep neural network</b> in <b>TensorFlow</b> to identify 10 different types of object classes.</li></ul> <div><span>Python</span> <span>PyTorch</span> <span>TensorFlow</span> <span>JavaScript</span> <span>Figma</span> <span>PyQt5</span></div>
Apr 2023 Jan 2023	<b>Front-End Developer, NORTH YORK, Sparklease Inc.</b> <ul style="list-style-type: none"><li>Worked with <b>RESTful API</b> and <b>ASP.NET MVC</b> to develop user uploaded vehicle's detail page in <b>ASP.NET</b> and <b>WeChat MiniApp</b>.</li><li>Applied lease/finance monthly payment algorithm to implemented a calculator with various canvas widgets such as a draggable round progress bar.</li><li>Integrated and enhanced vehicle and user information upload features using <b>JS</b> and <b>AJAX</b>.</li><li>Improved the website's <b>performance</b> by <b>60%</b> and optimized <b>SEO</b> by applying <b>Lazy Load</b>, eliminating unnecessary codes, enabling text compression, and using crawlable links etc.</li></ul> <div><span>ASP.NET</span> <span>MiniApp</span> <span>JavaScript</span> <span>REST API</span> <span>AJAX</span></div>
Aug 2022 May 2022	<b>Web Developer, TORONTO, eButterfly</b> <ul style="list-style-type: none"><li>Developed the 6.0 version of the company's website which migrates the website from Angular to <b>React</b> and finalized the server using <b>node.js</b>.</li><li>Built the admin panel's pages according to an older Angular version in <b>React</b> and developed data listing feature and data filter.</li><li>Finalized the <b>swagger documentation</b> in the company's server.</li><li>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 <b>Flask</b> and <b>FastAPI</b> during this.</li></ul> <div><span>React</span> <span>node.js</span> <span>TypeScript</span> <span>Python</span> <span>Flask</span> <span>FastAPI</span> <span>Docker</span></div>

## PROJECTS Find more projects at : trotyl.xyz/projects

### PERSONAL WEBSITE AND BLOG

AUG 2020 - PRESENT

 [github.com/trotyl15/trotyl-home](https://github.com/trotyl15/trotyl-home)  trotyl.xyz  blog.trotyl.xyz

-Self-taught **HTML** and **CSS** to create the front-end of a website which includes my past projects and information about myself.  
-Implemented the back-end side using **Python Flask** and stored the data by **PostgreSQL**, letting me to add new projects on the website dynamically.  
-Developed a project preview widget using **JS** that shows the expected look of the project block before sending it to the server.  
-Automated the blog deployment process by adding **GitHub Actions** into the pipeline.

Python Flask PostgreSQL HTML CSS JavaScript Heroku Hexo

### LOCAL AREA NETWORK CHATTING PROGRAM

DEC 2020

 [github.com/trotyl15/chatclient](https://github.com/trotyl15/chatclient)

-Built client application using knowledge in **Java sockets**, network programming, and **Java OOPs** concept to connect users to a LAN chatting program.  
-Developed desktop application in **Java** to view and speak to all users as well as send private messages.

Java Java Socket Swing