

# Danny Wu

✉ d246wu@gmail.com • 🏠 dannywuwu.github.io • 📷 dannywuwu • 🌐 wuda

## Skills

**Languages** Python • JavaScript • TypeScript • C# • C++ • C • Java • Kotlin • SQL • HTML/CSS  
**Technologies** React/Redux • Angular • Node • Express • Flask • ASP.NET Core • Docker • Jest

## Experience

### IBM Extreme Blue

Markham, Ontario

TECHNICAL INTERN - MICROSERVICES

May 2022 - August 2022

- Prototyped an AI tool enhancing IBM's **Mono2Micro** to define **architecturally solid APIs** to facilitate modernisation of monolithic applications
- Lead codegraph analysis with **NetworkX** in **Python** and built pipeline to generate API definitions from static analysis of **any Java application**
- Rendered analysis as a **Swagger-like blueprint** in **React**, recommending transformed microservice APIs with **high explainability** to developers
- Pitched solution to **20 IBM executives** and multiple business units, cultivating **public speaking skills** in presenting to **over 300 people**

### Smart & Biggar

Ottawa, Ontario (Remote)

SOFTWARE DEVELOPER - IT

September 2021 - December 2021

- Trained a multiclass **ML classification model** for **10 categories** with **95% precision** using the **spaCy NLP** library in **Python** on extracted emails
- Built an automation process in **C#** to keep **SQL** database consistent with DayForce HCM employee information by **concurrent HTTP requests**
- Introduced **Angular** and **Docker** to the tech stack, improving frontend code quality and containerizing backend services for easier deployment

### Smart & Biggar

Ottawa, Ontario (Remote)

SOFTWARE DEVELOPER - FULLSTACK

January 2021 - April 2021

- Developed a **widget dashboard** framework from scratch in **ASP.NET Core** for a web portal landing page using the **MVC design pattern**
- Built an **ASP.NET Core Web API** to manage dashboard data using **CRUD** operations on **SQL Server** with **Dapper ORM** and stored procedures
- Wrote API endpoints in **C#** and integrated **SignalR Websockets** with client-side **JavaScript** for **real-time notifications** of changing data
- Implemented **UiPath RPA** to automate manual tasks including scraping data, converting emails to PDF, and sorting 1000+ emails daily

### AlgoDaily

New York, NY (Remote)

CONTENT CREATOR/QA

September 2020 - February 2021

- Produced videos explaining algorithms and **wrote articles on programming** including algorithmic analysis and software interview knowledge
- Provided solutions and developed automated test cases for algorithm questions using **JavaScript**, **Python**, and the **JUnit** testing framework

### University of Waterloo

Waterloo, Ontario (Remote)

SOFTWARE ENGINEERING - MOBILE

June 2020 - August 2020

- Created a **React Native** app to connect Waterloo students in-person through activities pertaining to COVID guidelines
- Implemented user group chat messaging between activity members using **Firebase Realtime Database**, handling 30+ concurrent users

## Projects

### Youtube Video Quiz

GITHUB.COM/DANNYWUWU/VIDEO-GUESSER

October 2021

- Created an online trivia game in **React** running in **real-time** using **Socket.IO WebSockets** on an **Express backend** written in **TypeScript**
- Designed frontend with **Ant Design UI**, rendering data from the **Youtube API**; developed WebSocket events and wrote test suite using **Jest**

### Picture Police

GITHUB.COM/DANNYWUWU/PICTURE-POLICE

September 2021

- Built a bot with **Discord.py** which analyzes and censors explicit images and profanity using a **Flask** server hosted on **Google App Engine**
- Integrated **Google Cloud Vision OCR** with image classification library and **Python PIL** to modify and replace unacceptable image content
- Combined above with **NLTK sentiment analysis** and custom profanity checking to produce a safety rating based on both text and image

### Aang

GITHUB.COM/DANNYWUWU/AANG

January 2021

- Built a **React** web application styled with **Chakra UI** that tracks user body posture in **real-time** using their webcam at Hack the North 2020++
- Used **Tensorflow's Posenet ML model** to retrieve pose data from video feed, calibrating initial posture for use **with any camera/position**
- Implemented visuals to notify users of deviation from their initial calibrated position based on calculations comparing recent user pose data

## Education

### University of Waterloo

Waterloo, Ontario

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING (CO-OP)

September 2019 - April 2024

- President's Scholarship of Distinction, Purdy Crawford Entrance Scholarship for Academic Achievement
- UW Software Engineering Society - Executive VP Events, Waterloo Engineering Student Ambassador
- Relevant Courses: CS240 (Data Structures) • CS247 (OOP) • CS341 (Algorithms) • CS348 (Database Systems) • SE350 (Operating Systems)

### Royal Conservatory of Music

Toronto, Ontario

ARCT DIPLOMA IN PIANO PERFORMANCE: FIRST CLASS HONOURS

August 2019