PAULINA GRACE KHEW

SYSTEMS DESIGN ENGINEERING AT THE UNIVERSITY OF WATERLOO

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TECHNICAL SKILLS

Languages: Python, JavaScript, SQL, C++, PHP, HTML/CSS
Frameworks and Tools: Flask, Django, Laravel, Git, Kubernetes, Docker, Jupyter Notebook, PostgreSQL
Libraries: Pandas, jQuery, Bootstrap, SQLite, NumPy, Keras, BeautifulSoup, React, Pygame
Awards: Motorola Engineering Scholarship, University of Waterloo President's Scholarship

WORK EXPERIENCE

ApplyBoard
Kitchener, ON
May – Dec 2020

FULL-STACK SOFTWARE ENGINEER (4-MONTH CO-OP + PART TIME)

- Solely responsible for **OCR** project that processes various documents using **OpenCV** and **Google Cloud Vision**
- Implemented **preprocessing techniques** such as adaptive thresholding, image rotation, and face detection in order to raise the accuracy of parsing data from passports, IELTS, and Aadhar documents by **over 30%**
- Migrated **FrontApp** project from previous term into a new microservice within a **Kubernetes cluster** using **Docker**
- Investigated and **implemented new technologies** by creating technical proposals, user walkthroughs, and demos

ApplyBoard
Kitchener, ON
Sep – Dec 2019

FULL-STACK SOFTWARE ENGINEER (CO-OP)

- Worked on an intermediary **API server using Flask** that utilizes **webhooks** to parse and classify incoming emails and **automates** tasks such as updating profiles and sending notes to students on the ApplyBoard platform
- Spearheaded a **machine learning** project that performs **sentiment analysis** on incoming emails and flags urgent emails on **FrontApp**, a corporate email platform used by the Customer Experience team
- Automated the login, autofill, and submission of applications on various school portals such as OCAS and OUAC using a **Google Chrome extension** written in **JavaScript** and **Jquery**
- Developed a **React** dashboard to be used by the commissions team that interacts with backend

Fairtax
Oakville, ON
Jan 2019 – Apr 2020

JUNIOR SOFTWARE DEVELOPER (4-MONTH CO-OP + PART TIME)

- Designed, developed, deployed, and tested features for the **Django** GrantMatch app using **Python**
- Created a section on the **PHP** FTXGrants system that dynamically renders website information into a marketing PDF using **HTML**, **CSS**, and **JavaScript** through **PhantomJS**, a scriptable headless web browser
- Performed **data analysis** with **Pandas** and **BeautifulSoup** to scrape and clean data within **Jupyter Notebooks**

CODING PROJECTS

ApplyBoard
Kitchener, ON
Dec 2019

IMAGE CLASSIFICATION

- Created **deep learning models** for **image classification** using Python's **Keras** library
- Trained an **image classification** model for verification of uploaded documents in an **OCR** project at **ApplyBoard**

Hack the Valley
Toronto, ON
Feb 2019

OUTWEATHER

- Created a **Python Flask** web application that **displays the weather** and **suggests outfits and accessories** based on the user's location and information from the **OpenWeatherMap API**

Byte Academy
New York, NY
Jul 2018

WEB TRADER

- Constructed a **Flask** web application for trading Nasdaq stocks using the **Intrinio stock quote API**
- Employed **SQL** and **Python** to create and interact with **SQLite3** databases used to store user information, transactions, and holdings

EDUCATION

University of Waterloo
Waterloo, ON
Sep 2018 - Apr 2023

BACHELOR OF APPLIED SCIENCE (BASc) IN SYSTEMS DESIGN ENGINEERING

- Learned **object-oriented programming** in **C++** in *Digital Computation* and *Data Structures and Algorithms* courses
- **Motorola Engineering Scholarship –** presented annually to one outstanding student entering first year
- **University of Waterloo President's Scholarship –** awarded to students with admission averages above 90%

Byte Academy
New York, NY
Jul 2018 – Sep 2018

PYTHON FULL-STACK IMMERSIVE BOOTCAMP

- Successfully completed a 240-hour curriculum of study in full-stack web development program learning **Python**, **SQL**, **Pandas**, **JavaScript**, **Flask,** and **Django** as well as how to navigate the **Linux operating system**