Amy Qin

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3A Chemical Engineering @ The University of Waterloo

Technologies--

- NodeJS
- Python
- PHP
- Github Actions
- React
- Bash
- SQL
- Puppeteer & Cypress

Highlight of Qualifications--

- Skilled in using Javascript and Typescript to develop parsers, web scrapers, and chemical engineering calculators
- Experienced in using Python libraries like Django, Flask for front-end development, Numpy, Matplotlib for modeling reaction rate models, and Pyfirmata for programming microcontrollers.
- Proficient in developing test automation and continuous integration pipelines with NodeJS, and working with automation and CI/CD tools such as Github Actions, Circle CI, Cypress and Percy in Linux,, Darwin, and Windows
- Experienced in full-stack web development using PHP, HTML, JS, CSS, and MySQL.
- Familiar with traditional, waterfall, and agile workflows

Professional Experience--

Questrade, *Fullstack Engineer*
Full time co-op | Jan. 2022 - Apr. 2021 | Toronto, ON

- Worked independently to develop a legal regulation dashboard that changes view for stakeholder identity using the Google Developer API, Django, and PyMySQL with a MySQL relational database.
- Dynamically generated a dashboard using Flask to display database and package versions scraped from 30+ Linux virtual machines using Bash and SSH.
- Completed a validator for market data to check for invalid data types, validate SIN, and catch deduplication.
- Developed a dashboard to display continuous testing data using PHP, HTML, and MySQL database.

Condoworks, *Junior Software Developer*
Full time co-op | May. 2021 - Aug. 2021 | Toronto, ON

- Used JavaScript to develop and maintain scrapers and parsers used to download and process PDF invoices.
- Utilized PHP, MySQL, and Phinx to add features to the database and the frontend simultaneously.
- Assisted in the development of a cache system that allowed 20,000 invoices to be parsed in under two minutes.
- Familiar with using AWS-SDK to read/write data to S3 Buckets with Express to create endpoints for parsing.
- Deployed to parser and app daily and completed over 60 feature requests and bug fixes in four months.
- Experienced in using various npm packages to help in parsing, including googleapis and node-google-drive.
- Reported on app, parser, and AWS errors daily and implemented solutions in order to maintain code stability.

Prodigy Education, *Test Automation Engineer*
Full time co-op | Sept. 2020 - Dec. 2020 | Toronto, ON

- Developed proof of concepts for CI automation, parallelism, and code coverage using NodeJS and Bash
- Researched and documented proof-of-concept pipeline automation with the use of virtual machines and parallelism in order to reduce runtime.
- Reduced workflow runtime by migrating continuous testing from Circle CI to github actions, where Docker images were used to run parallel automated tests as a part of an automated development pipeline
- Cut down runtime by 60x and doubled test efficiency as a result of using parallel Docker containers
- Integrated code coverage thresholds into the automated pipeline for the development environment

Solink, *Quality Assurance Specialist*
Full time co-op | Jan. 2020 - May 2020 | Kanata, ON

- Worked as a QA specialist and parser developer for a POS data integration service used by major retailers, restaurants, and banking systems
- Automated the parser QA process, successfully reducing manual QA time from 6 hours to 2 minutes
- Developed parsers to map raw data structures retrieved from AWS as a part of a parser pipeline
- Used Node JS, Jest, and Yarn to process, monitor, and validate large data sets with automated test suites

Education---

Candidate for Bachelor of Applied Science at University of Waterloo, *Honours Chemical Engineering*

September. 2019 - Expected Graduation Date: April 2024

Personal Projects--

amyqin.ca | *https://www.amyqin.ca/* Personal website and portfolio showcase.

ChEJs | *npm* | *Github* ChEJs is an npm package containing chemical engineering functions.
- Physical chemistry calculations: Real gas equations, solution thermodynamics, chemical reaction calculations
- Chemistry calculations: molar mass, heat capacity from constants, antoine's calculation for vapor pressure

Fluid Flow Through a Bed of Solids | *Github* Calculator for the superficial velocity using the Ergun Equation
- The rearranged Ergun Equation solves for the superficial velocity of fluid flow through a catalyst-packed column using parameters such as: porosity, packing diameter, dynamic viscosity, density, and delta P