Zackary Ren

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SUMMARY

- Third year Software Engineering student experienced in multiple programming languages
- Advanced project-based programming experience with **Python**, **Java** and **C** in **Unix** environment
- Comprehensive understanding of **Data Analytics**, **Machine Learning** & **NLP** through projects and work experience

EDUCATION

McMaster University   Sept. 2018 – April 2023
B. Eng – Software and Biomedical Engineering – (3.80/4.0 CGPA)   *Hamilton, ON*
Activities: iBioMed Society Tech Team, McMaster Engineering Competition (MEC)
Courses: Data Structures & Algorithms, Software Design, Databases, Digital Systems & Interfacing, Linear Optimization

EXPERIENCE

Software Developer   July 2020 – Present
POCUSNEO   *Virtual*

- Currently developing a Clinical Decision Support System (CDSS) app for Neonatal Hemodynamics
- Managing states of widgets using the BLoC pattern
- Translated initial design into modular Flutter app
  Languages/Tools: Flutter

Software Engineering Intern   May 2020 – Aug. 2020
Coveo   *Montreal, Quebec*

- Developed initial ML Config Service API framework for Profile Dynamic Configuration project
- Implemented a new dimension for Profile Streaming and performed end-to-end validation
- Updated default behaviour of models to use on-demand dimensions only and developed an accompanying Bash script to automatically insert on-demand orgs in DynamoDB
  Languages/Tools: AWS - (DynamoDB, EC2, S3), Java, Scala, Spark Swagger

PROJECTS

NearBuy | *JavaScript, React Native, MongoDB, Radar API*   May 2020
- Mobile food app to support local restaurants during COVID19
- Implemented Radar's Geolocation API for Search and Distance
- Parsed .csv of restaurants into MongoDB and queried MongoDB on user search

Veritech | *Python, React, Azure, Django*   Nov. 2019 – Feb. 2020
- Agorize: AI for Societal Impact Challenge – **Top 26 of 147** teams
- Parse user's query with Python's Beautiful Soup and requests module
- Data cleaning with NLTK, pandas and scikit-learn in Python
- Machine learning bias detection model built with Microsoft Azure's NLP
- Web interface built with Django, React and HTML

Grapht.ai | *GCP, React, Node.js, MongoDB*   Jan. 2020
- Skin graft classification using Kaggle dataset with GCP AutoML Vision
- Patient-Physician dashboard platform built with React and Node.js
- Aggregated data stored with MongoDB

Image Filtering | *C*   Nov. 2019
- Input/output .ppm image file and convolution kernel file
- Applied image filtering techniques: Edge Detection, Sharpen, Blur

SKILLS

Languages: Python, C++, C, Java, Scala, MATLAB, SQL
Frameworks: Flutter, React/React Native, Django, Spark
Libraries: pandas, NumPy, NLTK, Matplotlib, scikit-learn, OpenCV