Kevin **He**

✉ yc4he@uwaterloo.ca | 🏠 yuchenhe.me | YuChenHeMTL | in yu-chen-he

Skills

Programming   Python, C/C++, Javascript, Java, MySQL
Frameworks   Tensorflow, Flask, Spring, Node.js, React, Webpack, Git

Work Experience

Tencent
Oct. 2020 - Jan. 2021
MACHINE LEARNING ALGORITHM ENGINEER
Shanghai, China

- Worked on an **AutoML** model optimization system designed to deliver the most optimal hyperparameters for user input data
- Implemented Hyperband and BOHB **hyperparameter opt. algo.**, improving the performance of Tencent's HPO framework by **10.9%**
- Developed an automated hyperparameter-optimizing training module for Tencent Ti-One using **Flask** backend
- Assisted in the training of deep learning models such as ResNet **CNN** using **Tensorflow**

Bilibili
Jan. 2020 - May. 2020
BACKEND DEVELOPER
Shanghai, China

- Took part of Project Hawkeye, a **Java Spring**-based web scraping project monitoring all competitive products in the PVC figurine category and sales data with **MySQL** database and **Redis** cache
- Increased precision of product name matching algorithm by **14%** using word separation analysis and one-hot encoding + cos similarity
- Developed a new scraping system using task clustering and the **Node.js Puppeteer** library, capable of handling **8000+** requests per hour, superceding the previous one by **700%**
- Enhanced the project's anti-scraping bypass methods using **ADSL IP proxy** rotation and building **cookies + user-agent database**

Ford Motor Company
May. 2019 - Sep. 2019
FULL-STACK DEVELOPER
Waterloo, Canada

- Engaged in the Vehicle Infotainment bug report system developed in **Java Spring** and **Tomcat** server with **Knockout.js** frontend and **Splunk** database management
- Raised system user count by **20%** by improving report processing capabilities and displaying critical information from vehicle to users
- Increased frontend report clarity and critical data awareness by executing a major overhaul to the processing system's Knockout.js UI, adding better visuals and gathering vital build information

Projects

Project Ava (Python, Javascript)
Sep. 2019

- Created a website that returns video indexes of a politician's speeches that summarizes their stances on major issues
- Implemented video indexing using **Microsoft Azure** Video Indexer API and front end using **React**, and hosted back end on **GCP**

Privacy Policy Index (Python, React)
Sep. 2019

- Developed an analysis program using machine learning to determine the readability + quality of privacy policies
- Implemented a linear regression machine learning model to determine the quality of policies on a scale from 0 to 5 based on the complexity of the policy's vocabulary
- Designed front end web UI with **Ant Design**, a **React** library, and **Flask** backend

PAC-man.c (Arduino, C/C++)
Oct. 2018

- Developed modern implementation of Pacman in **C** that runs in terminal, controlled by an **Arduino** modified as a gamepad
- Executed game design and implementation in **C** and programmed the modified Arduino controller in **C++**

Education

University of Waterloo
Sep. 2018 - Jun. 2023
B.S. IN SOFTWARE ENGINEERING
Waterloo, Canada