Edward Ren

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Languages   Python**,** SQL, JavaScript, C++, C, R, HTML/CSS, Visual Basic
Technologies   Pandas, PySpark, MongoDB, scikit-learn, Docker, Node.js, NumPy, Git, React

Experience

IBM   Calgary, Alberta
Cognitive Software Developer - Advanced Analytics   *January 2019 – April 2019*
- Tuned **scikit-learn** decision tree classifier on 20k+ oil wells to predict geological formations by production rate
- Parallelized merging and iterative operations in **Pandas** across 12 cores to speed up computations by 30%
- Applied data preprocessing using **NLP** imputation strategies on 150 million+ dataframe rows
- Optimized pipeline for **Spark** dataframes with partitioning to boost writes to S3 by 75% to 250k rows/second

Blackberry   Ottawa, Ontario
Software Engineering Student - AI in Open Source   *May 2018 – August 2018*
- Led **Dockerized** package regulatory system with **Django** to cut time spent on certifications by 90%
- Designed **association rule** learning model to reduce false positives in licensing conflict predictions by 30%
- Coupled microservices-based software stack with **Kafka** data streams to reduce latency by 95%+
- Implemented scalable search indexing with **Elasticsearch** to manage analytics on 21 million commits

WATonomous   Waterloo, Ontario
Full-Stack Development Lead (watonomous.ca)   *October 2017 – August 2018*
- Led autonomous vehicle team's website in **React** and **Express.js** to serve 2,000+ monthly visitors
- Containerized production site in **Docker** with SSL and **Nginx** to trim page rendering times by 60%
- Developed applicant back-end server with **Node.js** and **MongoDB** to handle text and resume uploads

Ciena   Ottawa, Ontario
Open Source Software Intern   *July 2016 – August 2016*
- Detected licensing inconsistencies using tree traversal algorithms in **Visual Basic,** classifying 50% of tasks
- Mass-crawled remote repositories in **Python** to obtain URLs for 2,100+ licenses from 80+ sources
- Revitalized department's homepage with **React** and **D3.js** to graphically display weekly data for analysis

Projects

HeartBit - Award winning app at Hack The North (*github.com/EdwaRen/heartbit*)   2018
- Built biometrics analytics app using image processing in **OpenCV** and **TensorFlow** to monitor anxiety

Recycle Can - Creator and lead developer (*recyclecan.ca*)   2017
- Architected iOS and web navigation app with 18,000+ downloads to guide users to nearby recycling centres

Achievements

HeartBit - Canadian Special Forces (CANSOFCOM) winning hack   2018
Recycle Can - Interviewed and featured on Metro News, further endorsements by regional school board   2017
ACT score of **35/36** - Over 99th percentile   2016

Education

University of Waterloo - *Bachelor of Software Engineering*   *Sept 2017 – Apr 2022*

Interests   Skiing, Blitz chess, Speedcubing, Rock climbing, Hiking, Quizbowl trivia