Alex **Wang**

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SUMMARY

Languages: C, C++, Python, Java, SQL, HTML/CSS, JavaScript

Frameworks/Tools: NumPy, Pandas, MongoDB, React, Redux, OpenGL, Git

EXPERIENCE

Hudson River Trading – Incoming Core Intern *Jun 2020 – Aug 2020*

- Incoming Core Intern working on HRT's live trading and research environments.

Citadel – Quantitative Research Intern | GQS *Jan 2020 – Apr 2020*

- Researched unsupervised **dimensionality reduction** techniques for productionizing models trained on huge feature sets.
- Modified machine learning pipelines to automate feature selection in model training and inference.

Citadel – Software Engineering Intern | Commodities *May 2019 – Aug 2019*

- Aggregated data sources to track the voyages of thousands of ships daily in order to model global crude supply and demand.
- Optimized caching of US Crude Microbalance model to speed up overall runtime by over **50%**.

Wish – Data Engineer Intern | Ad Monetization *Sept 2018 – Dec 2018*

- Increased click rate of Product Boost ads by over **20%** by improving the classification methods of promoted products.
- Introduced new ad revenue impression sources to add an estimated **$150,000** in weekly ad revenue.

IBM – Core Software Developer Intern | Watson Financial Services *Jan 2018 – Apr 2018*

- Improved retrieval times of document records by **30%** by optimizing JPQL queries and migrating document records to improve scalability.
- Integrated **PDF.js** library into Watson Regulatory Compliance product to enable client side rendering/searching of documents.

RESEARCH

University of Waterloo – Research Assistant *Sep 2019 – Dec 2019*

- Researched the conditional independence properties of sparse **triangular transport maps** under Professor Yaoliang Yu.

University of Waterloo – Research Assistant *Jan 2019 – Apr 2019*

- Worked under Professor Alexander Wong to develop **computational lenses** for light field microscopy in computerized cancer analysis.

PROJECTS

Python Neural Network – Python, NumPy

- Wrote neural network library and implemented **backpropagation algorithm** from scratch using NumPy.

Animation Facial Detection Classifier – Python, OpenCV, NumPy

- Implemented facial detection of 2D animated characters using a **Haar Cascade classifier** trained on 2500+ examples.

EDUCATION

University of Waterloo Computer Science and Statistics Double Major *2016 – 2021*
3.94 GPA

- Combinatorics and Optimization Minor, Computational Math Minor
- President's Scholarship of Distinction, Dean's Honours List every term