Alex **Wang**

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SUMMARY

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

Frameworks/Tools: MongoDB, Redis, Solr, React, Redux, JPQL, NumPy, OpenGL, Git, Bash, Docker, Jira, SVN

EXPERIENCE

Wish – Data Engineer Intern | Product Boost *Sept 2018 – Present*

- Increased weekly Product Boost ad revenue by **$50,000** by improving classification methods of promoted products.
- Analyzed user behavior through **A/B testing** to introduce new Product Boost impression sources, adding an estimated **$100,000** in weekly ad revenue.

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

- Improved retrieval times of document records by **150%** by optimizing JPQL queries and migrating **millions** of document records to **IBM Cloud Object Storage** to improve scalability.
- Integrated **PDF.js** library into Watson Regulatory Compliance product to enable client side rendering/searching of documents.
- Took initiative to rewrite **Redux** reducers in immutable fashion to improve DOM tree re-render times by **over 100%**.

SideFX – 3D Software Developer | Houdini *May 2017 – Aug 2017*

- Designed and implemented **Motion Path** tool to greatly improve animator workflow in **Houdini 16.5**.
- Rewrote **OpenGL shaders** to decrease viewport rendering and response times by **50%**.
- Worked alongside design team to redesign **QT** UI menu components for Houdini 16.5.

Finchway Group – Data Analyst *Jul 2016 – Aug 2016*

- Published **7 articles** analyzing key Major League Baseball statistical trends during the 2016 season related to market inefficiencies.
- Performed **regression analysis** using thousands of data points on player offence/defence retrieved from Baseball-Reference.com to determine the contributions of individual baseball players towards team success.

PROJECTS

Python Deep Neural Network – Python, NumPy *2018*

- Wrote **neural network library** and implemented **backpropagation algorithm** from scratch using Numpy for matrix math operations.

Animation Facial Detection Classifier – Python, OpenCV, NumPy *2017*

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

Boulder Game Engine – Java, OpenGL *2016 – 2017*

- Built **game engine** with functionality for 3D graphics, procedural terrain generation, and collision detection using **OpenGL**.

EDUCATION

University of Waterloo Software Engineering, Co-op *2016 – 2021*

- **3.93 GPA**, President's Scholarship of Distinction, Dean's Honours List
- **Self learning:** *Stanford Machine Learning* and *Johns Hopkins Data Science Specialization* through Coursera