# Anthony Chan

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A goal-oriented team-player with strong reasoning and creative-thinking skills refined through ~2 years of work experiences, a quantitative education and competitive extra-curricular activities.

## EXPERIENCE

### Global Data Market Analyst
**Bloomberg L.P.** **May 2020 – Present**

### Management Consultant/Data Scientist
**Ekimetrics** **Aug 2019 – Dec 2019**

Leveraged data science expertise to deliver marketing strategies. Executed compelling presentations that convinced Fortune 500 (luxury, FMCG and insurance) executives to adopt the team's proposals. Independently extracted sizeable datasets of 10 million+ records in SQL, then built, trained and tuned machine learning models in R and Python.

### A.I. Researcher
**McGill University & University of Waterloo** **May – Aug, Dec 2017**

Launched user studies to appraise the effectiveness of a new algorithm designed to improve webpage depiction for users with assistive needs. Co-authored academic research papers for the *Conference on Computer Vision* and *Winter Conference on Applications of Computer Vision*.

### Actuary
**FWD Insurance** **Dec 2017 – Apr 2018**

Performed data engineering and warehousing work. Reduced 20% of routine data transformation for month-end reporting. Automated gap analyses via ETL pipelines in Python, VBA and SQL.

## TECHNICAL PROJECTS

### Improving the KNN Algorithm • Experimental method to imputing missing data
Constructed a new distance measure for the *K-Nearest Neighbours* (KNN) algorithm. The proposed algorithm assigns weights to each independent variate based on their scaled regression Betas. Tested the prototype over 1,000 simulations on a known dataset with randomized missingness. Results revealed that relative bias saw improvement, but run-time soared as well.

### Stock Price Forecasting • Automated forecasting with the *Prophet* algorithm
Integrated *Yahoo Finance* into the pipeline, allowing for pre-processing of the data before parsing into *Prophet*. Developed a tool requiring only 2 parameters (a stock ticker symbol and forecast horizon) to generate forecasts and display them on an interactive UI.

### [Ongoing] Predicting Loan Durations • Implemented Extreme Gradient-Boosting
Cast an *XGBoost* model on *Lending Club*'s customer loan data (~900 customers and 74 factors) from 2007 to 2015. Tuned parameters of the model to achieve high accuracy with minimal foregoing of speed.

## EDUCATION

### Bachelor of Mathematics, Honours Statistics • Minor in Computer Science
**University of Waterloo**

### Behavioural Finance
**Duke University** • Classical economics, loss aversion, money management, Market Life Cycle

An exploration of the cognitive biases which typically mislead investors into making sub-optimal choices. Weighed risk-reward scenarios to avoid cases in which one might bear unnecessarily high amounts of risk for disproportionately low levels of reward.

### Bloomberg Market Concepts
**Bloomberg L.P.** • Economics, currencies, fixed income, equities, Terminal, portfolio management

An overview of the finance industry, portfolio management and *Bloomberg*'s core value propositions.

### [Ongoing] Machine Learning
**Stanford University** • Neural networks, Support Vector Machines, outlier detection

A compilation of industry-relevant machine learning concepts, many of which have inspired extracurricular projects of mine.

## SKILLS

**Technical** • R, SQL, Python, MATLAB, VBA, SAS

**Languages** • English, Cantonese, Mandarin

**Athletics** • National and provincial Taekwondo champion, 4th Degree Black Belt

**Music** • Scholarship-winning pianist, RCM Grade 8

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