

# Jonathan Chow

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## Employment and Research Experience

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- CPP Investment Board | Portfolio Construction Intern** **Toronto, Ontario | 2017**
- Developed and analyzed one-step portfolio optimization model with MATLAB and VBA to reduce investment program assumptions
  - Performed statistical analysis to determine optimal granularity of alpha inputs to asset allocation model
  - Expanded current portfolio optimization framework to server-side application for interdepartmental use
- School of Accounting and Finance | Research Assistant** **Waterloo, Ontario | 2016**
- Developed software to classify and perform textual analysis of bond issue prospectuses
  - Implemented algorithms to aggregate and structure prospectuses
- Hong Kong Asset Management | Foreign Exchange Intern** **Wan Chai, Hong Kong | 2016**
- Investigated impact of the British referendum to exit the European Union on foreign exchange rates
  - Analyzed gains and losses on trades directly following the referendum to find opportunities for profit
- CV Diagnostix | Software Engineer** **Ottawa, Ontario | 2016**
- Developed SQL database for the storage of sensitive patient information
  - Created system to be used by physicians for the automatic upload of information to the database
- Research Science Institute | Researcher** **Cambridge, Massachusetts | 2015**
- One of 84 students worldwide accepted for a research mentorship at the Massachusetts Institute of Technology
  - Applied time-series random forest classification to company sentiment and fundamental data to evaluate their effect on stock price changes

## Extracurricular Learning

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- Securities Exchange** **2017 - Present**
- At PennApps XV hackathon, programmed stock exchange listing securities without underlying assets to study investor behaviour
  - Post-hackathon, created scalping and market making algorithms and opened the exchange for students to trade
- Algorithmic Trading: Behavioural Strategies** **2016 - Present**
- Traded U.S. and Canadian public equities using news sentiment as a proxy for behavioural biases including herding and overconfidence
  - Implemented multinomial naive Bayes classifier to generate sentiment scores and random forest classifier for price change predictions
- Charitable Wishlist** **2014 - 2017**
- Developed website ([www.charitablewishlist.com](http://www.charitablewishlist.com)) to connect volunteers and donors with charitable organizations
  - Invited to present at OCE Discovery conference ([www.charitablewishlist.com/video/presentation.mp4](http://www.charitablewishlist.com/video/presentation.mp4))
- “Ctrl-F” Object Identification** **2016**
- At Hack Harvard, used Mathematica and Java to develop “Ctrl-F” for physical objects
  - Provided with an image, the program locates and highlights objects the user searched for
- Machine Learning | Coursera | Stanford University** **2016**
- Studied linear and logistic regression, neural networks, and support vector machines
- Algorithms: Design and Analysis, Part 1 | Coursera | Stanford University** **2016**
- Learned fundamentals of sorting and searching, divide and conquer, and randomized algorithms

## Distinctions

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- Mayor’s City Builder Award** **2016**
- Youngest recipient of award recognizing outstanding and innovative community contributions
  - Featured on Canadian news ([www.cbc.ca/news/canada/ottawa/our-ottawa-jonathan-chow-1.3372757](http://www.cbc.ca/news/canada/ottawa/our-ottawa-jonathan-chow-1.3372757))
- University of Waterloo President’s Scholarship of Distinction** **2016**
- Queen’s University Chancellor’s Scholarship (\$36000, Declined)** **2016**

## Education

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- University of Waterloo** **Waterloo, Ontario | 2016 - Present**  
Mathematical Finance and Computer Science
- Ashbury College** **Ottawa, Ontario | 2012 - 2016**  
International Baccalaureate Diploma | 97% | 4.0 | 41/45

## Activities and Interests

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- Mathematical Finance Student Association (President), Adaptive Market Hypothesis, Unicycling, Rock Climbing