

# NICHOLAS TRUONG

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## EDUCATION

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### The University of Texas at Austin

Spring 2020

- Bachelor of Science, Computer Science Honors (Turing Scholars)
- Bachelor of Science, Mathematics
- Bachelor of Business Administration, Business Honors
- Overall GPA: 3.8

## WORK EXPERIENCE

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### Optiver

June 2019 – August 2019

*Trading Intern*, Chicago, IL

- Analyzed non-electronic trades (e.g. pit/broker trades) to predict related, impending changes in electronic markets
- Traded real-time market events in a simulated environment, managing position risk and tracking profits over time
- Developed and distributed trading applications and tools to automate repetitive trading processes

### Coatue Management

June 2018 – August 2018

*Data Science Intern*, New York, NY

- Analyzed exhaust/alternative data to predict metrics strongly linked to company and industry performance
- Modeled key performance indicators that influence share price yielding profitable trades on surprise relative to consensus
- Created web-based user interface for tagging data, streamlining data validation and simplifying quality assurance

### Building Wide Intelligence Lab

May 2017 – May 2018

*Research Assistant*, Austin, TX

- Implemented image-based object detection in C++ to help robots learn relative object locations
- Constructed algorithm to localize robot and detect room boundaries from 3D point-cloud data
- Developed “scavenger hunt” policy to optimally manage and execute tasks or goals given in real time

### Pierce-Shimomura Lab

June 2012 – August 2013

*Research Assistant*, Austin, TX

- Propagated *C. Elegans* test subjects daily, ensuring health of the subjects and removing contaminants
- Discovered the neurological process responsible for geomagnetic sensation in animals
- Published “Magnetosensitive neurons mediate geomagnetic orientation in *Caenorhabditis Elegans*” to eLife journal

## PROJECTS

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### Support Vector Machines for HFT

December 2018 - February 2019

*Personal project*, Austin, TX

- Developed a modified pairs trading algorithm for GOOG/GOOGL
- Incorporated support vector machines to identify trading opportunities from minutely price data
- Achieved testing accuracy of 0.71 over a 100 minute test period after training over 2000 minutes

### Poker AI

June 2017 – August 2017

*Personal project*, Austin, TX

- Developed AI to competitively play Heads-Up No-Limit Texas Hold'em Poker
- Incorporated LSTM and standard feedforward neural networks to adapt strategy based on game history
- Strategically discovered and exploited mannerisms in opponent strategy in real time

## LEADERSHIP EXPERIENCE AND ACTIVITIES

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### Undergraduate Computational Finance

August 2016 – Present

*President*, Austin, TX

- Led multiple teams through ideation and execution to construct and pitch strategies for consideration in the team portfolio
- Created a model to predict VXX/VXXB price movements from VVIX and the implied convexity of VIX futures
- Analyzed, consolidated, and published current events and market conditions biweekly to the organization

## HONORS

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- Midwest Trading Competition, 1st Place Spring 2019
- The University of Texas at Austin, University Honors Fall 2016 – Fall 2018
- The University of North Texas, President's List Fall 2014 – Spring 2016
- American Invitational Mathematics Examination, Certificate of Distinction Fall 2012 – Spring 2015

## ADDITIONAL INFORMATION

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**Skills:** C, C++, Java, L<sup>A</sup>T<sub>E</sub>X, Python, Scala, Vim Script, exposure to Bash, Haskell, Javascript, R, Swift

**Interests:** Powerlifting (190/145/190kg), Classical Piano, Heavy Metal, Modal Text Editors, Mechanical Keyboards

**Work Eligibility:** Eligible to work in the U.S. with no restrictions