

# Anthony Rinaldi

## CONTACT

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LinkedIn

## SKILLS

### Languages

English (native) | Italian (conversational)

### Programming

Python | R | SQL | VBA | MATLAB | Java

### Software

Microsoft Office Suite | Git | Confluence | Jira  
| Tableau | Bloomberg Terminal

## HONOURS AND AWARDS

### Dean's Honour List

Western University 2018-Present

### Scotiabank HBA1 Award - \$11,000

Ivey Business School 2019

### Andrew and Sarah Hamilton

### Scholarships - \$1,800

Western University 2018

### Western Continuing Admission

### Scholarship - \$10,000

Western University 2017

## EDUCATION

Western University, London, ON

Bachelor of Science, Honors Specialization in Statistics

GPA: 96/100

2022

Ivey Business School, London, ON

Honors Business Administration

GPA: 84/100

2022

## PROFESSIONAL EXPERIENCE

TD Securities, Toronto, ON

Summer 2021

Sales & Trading Associate - FX Data Analytics and Innovation

- Developed a Python module to automatically publish Tableau Dashboards used in evaluating an FX auto-quoting algorithm; providing the business with a daily overview of client trends and a detailed analysis of trades
- Created a program to scrape information from the web and compile a report otherwise done manually; reducing human capital and creating efficiencies
- Automated over 10 recurring tasks; creating a pipeline that compiled and distributed all necessary reports
- Scrutinized current pricing structure of FX clients and proposed recommendations aimed at increasing revenue to management; the accepted proposals resulted in an expected annual \$2M increase in revenue

TD Securities, Toronto, ON

Summer 2020

Sales & Trading Associate - Prime Brokerage

- Implemented a program to detect inconsistencies between the firm's transaction records and counterparty records; determining the true value of firm exposure and reducing overnight risk
- Created a program to request returns of fixed income loans in which the firm no longer had capacity to supply; automating a previously manual task taking over one hour daily
- Assisted in designing a collateral delivery optimizer; better allocating collateral based on cost and eligibility

Ivey Business School, London, ON

Oct. 2019-Mar. 2020

Ph.D. Research Assistant

- Built an algorithm to extract relevant material from various banks' quarterly earnings call transcripts; automated a manual process and decreased the time required by 66%
- Created a script to pull news articles from the web for specific companies, formatting the results as needed for subsequent modelling

City of Toronto, Toronto, ON

Summer 2019

Financial Trainee

- Improved the City's Annual Financial Report through analysis of key financial indicators for enhanced recognition of financial position; supported management's goal of generating a concise, yet detailed report
- Optimized the process of analyzing customer accounts to identify erroneous transactions and respective cause; made procedure more efficient and saved time as a result of implemented suggestions

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## UNDERGRADUATE COURSES

Statistical Programming  
Data Analysis & Visualization  
Statistical Learning  
Mathematical Statistics  
Introductory Data Science  
Thesis Project in Statistical Sciences  
Advanced Statistical Computing  
Advanced Data Analysis  
Data Analytics Consulting

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## ACHIEVEMENTS

PBSN Pro-Bono Consulting  
Competition  
First Place

UWFA Stock Pitch Competition  
Top 20 Delegate

BUSINESS 2257 Feasibility  
Competition  
Top 5 Finalist

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## EXTRACURRICULAR EXPERIENCE

Mustang Capital  
Analyst

- Assisted in managing a student investment fund of \$45,000, through the derivatives and quantitative verticals
- Created programs to retrieve sports betting statistics from various websites, and subsequent analysis required to determine a probable trade idea; automating an investment strategy that generated 15% return per wager
- Produced Python screening programs based on trading strategies; reduced time spent on screening process

Ivey Sales & Trading Club  
Mentor

- Served as a mentor by organizing events for younger students and assisting them with interview preparation and on-the-job knowledge
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Summer Student

- Constructed business plans for the properties in the regional portfolio by assessing building tenancy strategy and geographical competition while summarizing key indicators such as building valuations and cash flows
  - Optimized the current customer service training program through analysis of revenue loss from non-repeat tenants and identified excess program costs; resulted in potential gain of \$5/square foot in rental rates
  - Confirmed the suitability of property budgeting plans through analysis of previous reports and company standards; ensured capital allocation was accurate and non-redundant
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## RESEARCH

### Transformer-Based Classification for Volcanic Seismic Signals

- Considered the use of the novel NLP technique *self-attention* for predicting volcanic event types from raw seismic signals
  - Designed a DNN architecture that enables superior signal classification compared to traditional approaches
  - Utilized different neural network layers such as convolutional, residual-convolutional, and long short-term memory
  - Became versed with the Keras deep learning Python package
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## PROJECTS

### Hack Western 8

- Invited to participate in the largest hackathon at Western University
- Developed a text and voice conversational AI bot intended for individuals seeking assistance with mental health problems
- Utilized the idea of transfer learning to fine-tune a pre-trained conversational GPT model on therapist conversation records
- Created a Flask API to connect the back and front end of the application

### Risky Space Business: NASA AI Risk Prediction Challenge

- Designed a project management tool using AI/ML that can move risk from being recognized and reported during or after a project, to being able to identify potential risks prior to the project

### Historical ETF Holdings

- Developed software to track how BlackRock's ETF holdings change
- Stock data is scraped from the BlackRock website daily, parsed for relevant information, stored in a PostgreSQL database, and displayed on a website for visualization: <http://www.etfdashboard.ca/>
- Hosted an entire web server from a mini-Linux machine (Raspberry Pi), integrating Google Web Analytics to track visits and users

### Algorithmic Trading Software

- Developed an automated mean-reversion trading strategy based on daily rebalancing of two highly correlated ETFs; presented a 3.3 Sharpe ratio when backtesting over the past four years
- Strategy uses the idea of Hidden Markov Models (specifically Kalman Filters) to predict correlation between the two ETFs daily
- Developed Java software to execute the strategy on a paper trading account

### Stock Price Prediction

- Tested supervised learning models for predicting stock prices
  - Attained stock prices of relevant companies through Python APIs
  - Considered Lasso and Ridge regression, a simple neural network, support vector regression, and ARIMA models for the prediction task
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