Daniel Wrafter

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Education

Massachusetts Institute of Technology — Cambridge, MA
Bachelor of Science in Computer Science, Minor in Mathematics; GPA: 4.7/5.0 — *Sep. 2016 – May. 2020*

- **Coursework**: Software Engineering Principles, Introduction to Deep Learning, Machine Learning, Inference, Automata, Computability, and Complexity, Introduction to Algorithms, Fundamentals of Programming, Discrete Math for Computer Science, Linear Algebra, Introduction to C/C++, Introduction to Python, Electricity and Magnetism, Multivariable Calculus, Macroeconomics

Experience

- **Figur8** — Boston, MA
  Fall Software Engineering Intern — *Sept 2018-Dec 2018*
  - **Signal Processing**: Researched machine learning methods for processing signals from Figur8's sensors and implemented algorithms from academic papers
  - **Software Development**: Built tools for signal analysis, created interactive data visualizations
- **Tiger Global Asset Management** — New York, NY
  Quantitative Research Consultant Intern — *Nov 2017-Aug 2018*
  - **Presentation**: Summarized key insights from research and software development projects to the Heads of Trading and CTO at $20+ billion hedge fund
  - **Data Science**: Applied ML methods including SVM, random forests, regression; created visualizations; streamlined existing analytics; created, updated, and queried SQL databases
  - **Automated Trading Research**: Backtested, analyzed, and optimized automated trading strategies
- **MIT Center for Brains, Minds, and Machines** — Cambridge, MA
  Undergraduate Researcher — *Sep 2017 - Jan 2018*
  - **Deep Learning**: Assisted with converting a deep learning library from Matlab to Python and implementing new features
- **MIT Infolab** — Cambridge, MA
  Undergraduate Researcher — *May 2017 - Sep 2017*
  - **Databases**: Developed interfaces for online databases for use in answering natural language queries
  - **Natural Language Processing**: Extracted English answers from HTML source code using techniques including regular expression matching

Skills

- **Programming Languages**: Python, SQL, Java, Lisp, R
- **Techniques**: Time series analysis, signal processing, APIs, automated web browsing and scraping, Agile Development
- **Technologies/Packages**: Numpy, Tensorflow, Keras, Pandas, Scikit, Multiprocessing, Git/Github, Jira, Matplotlib, SQLalchemy, Plotly, BeautifulSoup, Requests, Selenium, Emacs
- **Operating Systems**: Linux, MacOS, Windows, familiar with terminal use
- **Probablistic Analysis and Modeling**: Familiar with probability theory, computational graphical modeling, statistical inference, and machine learning algorithms

Projects

- **Talk To Trade**: Webpage which uses NLP to process voice commands to backtest automated trading strategies based on moving average crossover or RSI thresholds, and display metrics such as price, volatility, and RSI for any S&P 500 stock, competed at HackMIT 2018
- **StackWorkflow**: Python library that allows users to interactively query Stack Overflow for answers without leaving their IDE, streamlining the development process, competed at HackMIT 2017

Activities and Leadership

- **MIT Gordon Engineering Leadership Program**: Developed skills in technical leadership and problem solving
- **Orientation Leader**: Guided freshman students through MIT orientation week and assisted with event setup
- **Rowing**: Led high school team to win a National Championship, D1 rower in MIT's top priority boat freshman year, won in international field of over 60 teams at Royal Canadian Henley Regatta