

## **EXPERIENCE**

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### **Balyasny Asset Management**

**Chicago, IL**

#### **Quantitative Researcher**

*July 2017 – Present*

- Conducted research on various conventional and alternative datasets to explore systematic trading strategies
- Productionized a quant signal generation framework that provides unified interface to generate, validate, convert and upload trading signals. Greatly reduced the amount of repetitive code required for deploying strategies and improved robustness.
- Set up a workflow management system using Apache-airflow, docker and PostgresDB to automate daily signal generation, realize complex dependencies, manage logging, report performance attribution and monitor system status.
- Migrated an essential quantitative research tool written in R to the cloud using AWS Batch, S3 and docker to accommodate increasing computation needs. Enhanced research efficiency by reducing the execution time by an order of magnitude.
- Maintained and added new capabilities to a python analytical library that is actively used by many quant researchers within the firm. Improved documentation, enhanced performance, increased test coverage, and conformed code to PEP standards.

### **Balyasny Asset Management**

**Chicago, IL**

#### **Quantitative Research Intern**

*January 2017 – June 2017*

- Analyzed and visualized the computation time required by each component of the portfolio optimizer using cProfiler and SnakeViz. Identified inefficiencies and reduced run time by 50%.
- Reconstructed the risk exposures and covariance matrix of custom portfolios using cross-sectional risk factor models and attributed the performance of portfolios to a variety of style and industry risk factors.
- Constructed an event study tool using Python and SQL for analyzing the changes in asset price and firm characteristics throughout event windows; examined the interactions between event-window returns and the magnitude of the events; tested for statistically significant difference in event quantile performances.
- Tested the hypothesis of earnings expectation management before announcement dates by constructing a factor from institutional holdings, earnings expectations and analyst coverage data.

### **Lucena Research**

**Atlanta, GA**

#### **Quantitative Developer Intern**

*September 2016 – December 2016*

- Implemented a pairs trading strategy in Python by seeking mean-reverting equity portfolios pairs; constructed entry and exit signals based on the residuals of the hedge portfolios; tuned hyperparameters and performed cross-validation
- Implemented unit tests, added documentation and refactored code base for quality assurance

### **Kensho Technologies**

**Boston, MA**

#### **Research Analyst Intern**

*June 2016 – August 2016*

- Generated event study reports on trending financial topics to identify potentially profitable trades
- Developed an interactive web tool using Python, Flask & JavaScript to analyze asset price movements under given scenarios

## **SKILLS**

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- Python: OOP, data ETL, flask, bokeh, plotly, scientific computing using NumPy, SciPy, Pandas and Statsmodels
- Analytics: multivariate regression, timeseries analysis, Classification and Regression Trees
- Linux: docker containerization, Apache-Airflow, AWS CLI, git, cron, ssh, shell scripting
- SQL: Microsoft T-SQL, Postgres
- Other programming languages: R, Java, Matlab, SAS, C++, JavaScript, D3.js, Select.js, jQuery

## **EDUCATION**

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### **Georgia Institute of Technology**

**Atlanta, GA**

#### **Master of Science in Quantitative and Computational Finance**

*August 2015 – December 2016*

- GPA: 3.8/4.0
- Key Coursework: Finance & Investments, Fixed Income, Accounting, Numerical Methods, Derivative Securities, Financial Data Analysis, Stochastic Processes, Risk Management

#### **Bachelor of Science in Chemical and Biomolecular Engineering**

*August 2011 – May 2015*

- GPA: 3.5/4.0