

# BRANDON MORETZ

## Quantitative Development

An experienced software engineering professional with a successful track record working in the investment management industry. Successfully managed teams in a hands-on capacity at all of my previous roles after entering as an individual contributor.

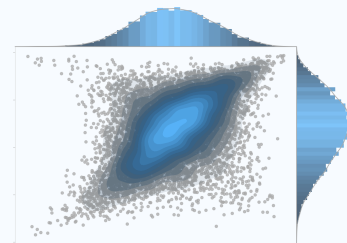
Enjoys solving problems, learning and teaching others.

## EDUCATION

- Dec '19  
|  
Mar '18
- **M.S., Data Science**  
Northwestern University 📍 Evanston, IL
- Analytics and modeling specialization emphasizing applied statistics.
  - Emphasis on both supervised and unsupervised statistical learning techniques.
- Dec '06  
|  
Aug '04
- **B.S., Computer Science (minor Mathematics)**  
Western Carolina University 📍 Cullowhee, NC
- Developed an interactive modeling application using Direct3D for biometric data captured using WISDOM (Weakly Identifying System for Doorway Monitoring).

## PROFESSIONAL EXPERIENCE

- Oct '19  
|  
Feb '13
- **Head of Development**  
MSD Capital, L.P. 📍 New York, NY
- Managed the software development team, reporting to Chief Operating Officer.
- Analytics Platform**
- Lead development effort on a team of five to build our in-house data analytics system.
- Collaborated with front office users to develop specifications for predefined and ad-hoc reporting modules (e.g., attribution, exposure, liquidity and cash availability).
  - Worked with portfolio managers and analysts to build factor-based models and stock screeners.
  - Developed scalable back-end data architecture that leveraged machine learning server (RevoScaleR) to host and execute our internally developed R packages.
  - Ensured 85%+ unit test coverage over all layers of the application with a combination of NUnit, Moq, tSQL-t and test.that.
  - Implemented a third party data warehouse solution to integrate accounting and order management systems to streamline the end of day NAV/P&L reporting.
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- Technology: R, C#, T-SQL, tidyverse, WPF/WCF, Machine Learning Server
- Trading & Risk Management**
- Worked with trading and operations to build out a risk management system.
- Created a suite of FX hedging and settlement tools to automate our FX process.
  - Built core hedging model in R to support usage of various hedging metrics (e.g., FMV, MTM, cost, fixed, underlying, custom model) to calculate the target exposure by strategy, then aggregated across the firm.
  - Consolidated disparate analyst models used to build option strategies in Matlab/Excel into an application framework built by leveraging QuantLib.
  - Built a real-time profit-loss system by integrating data from our core accounting / OMS systems and enriching it with market data using our market data service.
  - Developed a reusable market data service that encapsulated real-time feed requests for dependent upstream applications.
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- Technology: R, C++, C#, WPF/WCF, ReactiveX, QuantLib, Bloomberg SAPI



## CONTACT

✉ [bmoretz@ionicsolutions.net](mailto:bmoretz@ionicsolutions.net)

in [LinkedIn](#)

🐙 [Github](#)

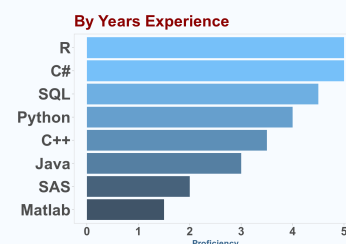
📄 [Stack Overflow](#)

📖 [Blog](#)

📞 +1 (201) 878-4968

For more information, please contact me via email.

## LANGUAGE SKILLS



Expert knowledge of the Windows Platform SDK, .NET Framework, Windows Presentation/Communication Foundations.

Experienced in statistical analysis, statistical learning models, and optimization methods.

Passion for building scalable, reliable and performant quantitative systems.

Oct '19  
|  
Feb '13

● **Head of Development**

MSD Capital, L.P. (Cont.)

📍 New York, NY

**Research Management**

Worked with research analysts to create a global repository of company research.

- Developed a non-intrusive metadata tagging system used to tag and identify research content.
- Used supervised learning methods to automatically tag user generated and external content (e.g., company, filing, write-up, model, earnings call).
- Research content automatically parsed for investment indicators (i.e., price targets) and stored in elasticsearch.

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Technology: Python, CLI/C++ Interop, NLP

Feb '13  
|  
Jan '12

● **Quantitative Developer**

Promontory Financial Group

📍 Remote

On-site and remote software consultant focused on client record auditing systems.

**Independent Foreclosure Review**

Lead development and implementation on workflow application designed to audit fortune 10 client.

- Managed client deliverables with an average development life-cycle of 2.5 weeks throughout the project.
- System concurrently supported 2,000+ users in the system with an average transaction count of 1.1 million per day.
- The resulting data set was used as the statistical basis for agreed financial settlement to borrowers.
- Assisted SMEs in converting legacy SAS models to R and validating statistical output.

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Technology: C#, T-SQL, R, SAS, WPF, Full-text Index

Dec '11  
|  
Feb '07

● **Senior Developer**

RR Donnelley

📍 Charlotte, NC

Technical architect for financial publishing and content management applications.

**RightContent**

Technical architect for a suite of financial publishing applications.

- Implemented the full specification for front-page server extensions (version 13.1) to enable native (i.e., Word, Excel) remote content authoring.
- Wrote a comprehensive functional language that enabled an expression syntax SMEs used to migrate content between platforms.
- Developed an LL parsing engine and supporting libraries for content transformation and styling.

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Technology: C#, T-SQL, ASP.NET, WebDAV



**PROFESSIONAL DEVELOPMENT**

Jan '15

● **Quantitative Analyst with R**

Certification

📍 DataCamp

Dec '19

● **Mathematics for Machine Learning**

Certification

📍 Imperial College London