

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

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M.S., Data Science
Northwestern University
Evanston, IL
- Analytics and modeling specialization emphasizing applied statistics.
 - Emphasis on both supervised and unsupervised statistical learning techniques.
 - Financial engineering and risk management as electives.
- Dec '06
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Aug '04

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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

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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 interactive reporting modules (e.g., attribution, exposure, liquidity and cash availability).
 - Worked with portfolio managers and analysis 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.

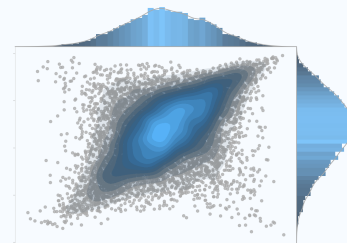
Technology: R, C#, T-SQL, tidyverse, WPF/WCF, Machine Learning Server

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 disperse 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.

Technology: R, C++, C#, WPF/WCF, ReactiveX, QuantLib, Bloomberg SAPI



CONTACT

✉ bmoretz@ionicsolutions.net

in [LinkedIn](#)

🐙 [Github](#)

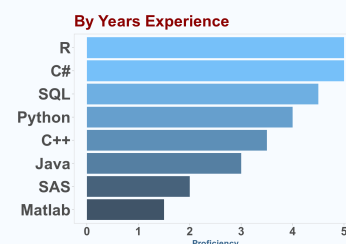
📄 [Stack Overflow](#)

📡 [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.

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.

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.

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