BRANDON MORETZ

Quantitative Development

An experienced software engineering professional with a successful track record working in the investment management industry. Grew from individual contributor to successfully managing teams in a hands-on capacity at all previous roles.

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 and statistical learning methods.
- Financial engineering and risk management electives.
- GPA: 4.0.

Dec '06 | Aug '04

B.S., Computer Science (minor Mathematics)

Western Carolina University — Cullowhee, NC

- Developed an interactive modeling application using Direct3D to render biometric data captured using WISDOM (**W**eakly **I**dentifying **S**ystem for **D**oorway **M**onitoring).

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

Led development effort on a team of five to build in-house data analytics system.

- Collaborated with front office users to develop specifications for interactive reporting modules (e.g., attribution, exposure, liquidity, cash availability).
- Worked with portfolio managers and analysts to build factor-based models and stock screeners with systematic execution and delivery.
- Developed scalable back-end data architecture that leveraged machine learning server (RevoScaleR) to host and execute 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 core operational systems, reducing end of day NAV/P&L report publish time by 70%.

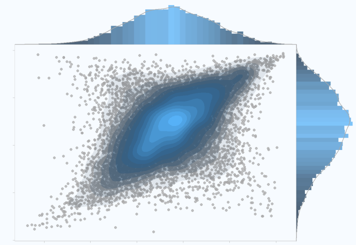
Technology: R, C#, T-SQL, tidyverse, WPF/WCF, Machine Learning Server

Trading & Risk Management

Worked with trading and operations to build a risk management system.

- Created a foreign exchange (FX) hedging and settlement system to automate intraday rebalance process by codifying manager specified rule sets.
- 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 and generate suggested rebalance transactions by portfolio.
- Consolidated disperse analyst models used to construct option strategies in Matlab/Excel into an application framework by leveraging QuantLib.
- Built a real-time profit/loss system to replace an expensive vendor solution that did not fully capture the needs of the business, a savings of six figures annually.
- Worked with head of trading and operations to build firm counterparty risk report.

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



CONTACT

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LinkedIn

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Stack Overflow

Blog

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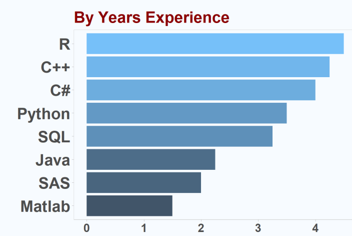
LANGUAGE SKILLS



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

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

Created a global research repository to accelerate productivity and enhance accessibility.

- 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).
- Automated the process of research content parsing for investment indicators (i.e., price targets) and storage in elasticsearch.

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

Feb '13 | Jan '12

Quantitative Developer

Promontory Financial Group

Remote

Quantitative software consultant focused on client record auditing systems.

Independent Foreclosure Review

Led development and implementation of workflow application designed to audit fortune 10 client.

- Managed client deliverables with an average development life-cycle of 3 weeks throughout the project.
- Constructed audit system to concurrently support 2,000+ users with an average transaction count of 1.1 million per day.
- Assisted SMEs in converting legacy SAS models to R and validating statistical output.
- The resulting data set was used as the statistical basis for agreed financial settlement to borrowers.

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

Led development and architecture of content authoring / workflow processing systems.

- Implemented the full specification for front-page server extensions (version 13.1) to enable native (i.e., Word, Excel) remote content authoring.
- Authored a comprehensive functional language that enabled an expression syntax SMEs used to customize client documents.
- 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