

# Sean P. Quigley

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## EXPERIENCE

**Shutterstock**, New York, NY

April 2014-Present

*Data Engineer*

- Key engineer in developing and launching the Shutterstock Data Platform, a system providing high-throughput, distributed messaging and semi-structured, streaming analytics data.
- Worked heavily on development of high-performance REST API that allows automated schema inference/evolution and translation of JSON data to Avro.
- Developed ETL processes supporting automated schema evolution and conversion of Avro data to ORC tables throughout a pipeline backed by Kafka, Hadoop and Hive.
- Created tool powered by Spark Streaming and Kafka for performing real-time threshold checks and alerting on a stream of time-series data with >1B events per day.
- Developing platform for search-term trend analytics powered by Hive, Spark and Solr.

**Klick Push**, New York, NY

August 2013-March 2014

*Data Scientist*

- Lead all data-related initiatives.
- Work with engineering team to design database model, capture and track user flow across Rails application, and set up analytics and reporting.
- Implement AB testing framework and design and manage experiments.
- Perform predictive modeling and music similarity analysis with Python stack and SQL.
- Generate insights used to improve user experience, conversion metrics, and music-ad targeting.
- Speak on data for pitches and business development outreach.

**TRQ Analytics LLC**, Stamford, CT

August 2010-May 2013

*Quantitative Equity Analyst*

- Responsible for quantitative research and development of a long-short, value-oriented, equity strategy.
- Solely developed C++ applications for running trading simulations over 20+ years of market price and fundamental data.
- Worked directly with portfolio manager to create and implement real-time model updates including: hedging of market capitalization effects using ETFs, identification of autocorrelations in company fundamentals, and optimization of capital gains tax treatment.
- Followed a scientific, hypothesis-driven research process that aimed to find results of statistical significance while avoiding the risk of data dredging.
- Assisted office CIO in due diligence and modeling for various hedge fund, private equity, and venture capital investments.

**Ohio Wesleyan University**, Delaware, OH

May 2009-July 2009

*NSF Summer Research Intern*

- Worked in the computer science department on an REU project funded by the National Science Foundation.
- Developed various heuristic algorithms in C++ to find solutions to an NP-complete, multi-user routing problem.
- Incorporated economic game theory into the algorithm in order to find cost-minimizing and stable Nash Equilibrium solutions.
- Co-authored paper: [The Shared Shortest Path Problem in Graphs](#).

## EDUCATION

**University of Michigan**, Ann Arbor, MI

April 2010

Major: B.S. Economics, B.S. Physics

GPA: 3.5/4.0

Relevant coursework:

- Game Theory, Financial Engineering, Statistical Economics, Multivariable Calculus, Differential Equations, Numerical Analysis, Modern Physics, Quantum Mechanics, C++ Programming

**General Assembly**, New York, NY

Fall 2013

- Completed 11-week data science and machine-learning course.
- Built a music recommendation system using artist Twitter data and a Nearest neighbor approach.
- Heavily utilized Python data stack: NumPy, SciPy, Pandas, SciKit-Learn.

## SPEAKING

**Conferences:** [StampedeCon 2016](#)

## PROFICIENCIES

**Languages:** Scala, Python, Java, Javascript, C++, Haskell

**Frameworks/Tools:** Apache Spark, Kafka, Hadoop, Hive, AWS, MySQL, Oozie, Git, Maven, Puppet, Play, Netty

## ACTIVITIES & INTERESTS

- Participant in Kaggle predictive modeling competitions.
- Avid Brazilian Jiu-Jitsu practitioner. Won dozens of medals in various grappling competitions.
- Member of the University of Michigan men's boxing team during college. Achieved a 5-0 record in amateur competition sanctioned by USA Boxing.