Robert Howley

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EXPERIENCE

Fellow, The Data Incubator, NY, NY; June 2014 - July 2014
- Six week statistics and machine learning bootcamp
- Built a beer recommendation engine using reviews from beeradvocate.com
- Recommendations leverage a NLP selected vocabulary from the reviews to determine similarity of beers in different styles
- Collaborative filtering among the most similar beers yields the final recommendation

Quantitative Analyst, Attalus Capital, Philadelphia, PA; Oct 2008 – Aug 2010
- Developed and maintained the proprietary risk management system
- Designed the SQL Server database structure and .NET reporting libraries
- Built interactive linear modeling tools that estimate risk factors of potential investments
- Implemented VaR, CVaR and Implied Binomial Trees using ExcelDna, C#, and C++

Actuarial Analyst, Philadelphia Insurance Co., Philadelphia, PA; Jan 2007 – Oct 2008
- Performed reserve analyses on 30+ lines of business, catastrophe exposure analysis, coverage level rate indications
- Used linear models and mixture models to estimate future losses for risk cohorts

EDUCATION

PhD Candidate: Applied Probability and Statistics, IE
Lehigh University: PC Rossin College of Engineering and Applied Science
- Coursework: statistical modeling, optimization theory, stochastic calculus
- Research areas include semi-parametric derivatives valuation, distributionally robust optimization for portfolio construction, modeling and simulation of financial time series
- Working Papers: "*Data Driven Methods for Computing Semi-parametric Bounds*" (2013); "*Bounds on the Expected Payments of Insurance Instruments*" (Submitted 2013, funded by the Actuarial Foundation); "*Balanced Assignment of Experimental Units in the Analysis of Covariance through Optimization*" (2011)
- Conference Proceedings
  - Modeling and Optimization: Theory and Applications; 2011, 2013; Beth., PA
  - Actuarial Research Conference 2013, Philadelphia, PA
  - INFORMS: 2011, Charlotte, NC; 2012, Phoenix, AZ

Master of Science: Financial Engineering: June 2010
Temple University: Fox School of Business, Philadelphia, PA
- Coursework: pricing/hedging of financial derivatives, linear and nonlinear optimization, time series analysis, quantitative risk management
- Independent study on implementing, calibrating and backtesting LIBOR Market Model

Bachelor of Science: Actuarial Science, Mathematics: May 2007
St. Joseph's University, Philadelphia, PA
- Completed Actuarial exams 1/P, 2/FM, 3/MFE, 3/L, and 4/C
- Exams cover probability and statistics with applications in risk management and loss modeling

COMPUTER SKILLS

Programming: C++, Python, R, C#, SQL, Visual Basic/VBA, ExcelDna
Software: LINUX, Git, MATLAB, MySQL, SQL Server, Bloomberg

OTHER INTERESTS

DIY home renovation projects and amateur carpentry