# Matthew S. Bane

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## Education

- **DePaul University, School of Computing and Digital Media** — Chicago, IL
  *Master of Science in Computer Science* — *June 2014*
  - Concentration in Artificial Intelligence

- **University of Pennsylvania, Wharton School** — Philadelphia, PA
  *Bachelor of Science in Economics* — *December 2000*
  - Concentration in finance

## Work Experience

- **Conversant** — Chicago, IL
  *Software Engineer - Ad Server* — *September 2014 - Present*
  - Design and implement new features and enhancements on a distributed ad server delivering real-time digital advertisements.
  - Work with other Engineers and Product Managers to establish and refine clear requirements which align with business goals.
  - Write robust, high-performance Java code for a high throughput, low latency system.
  - Write unit tests, test code in production environment, work with QA to create new tests and ensure coverage for all existing and new features in QA environment.
  - Work with Product Managers to verify releases of new features and troubleshoot any production issues.
  - Conduct performance testing and monitoring of production systems.

- **M&N Trading** — Chicago, IL
  *Quantitative Trader and Software Developer* — *February 2013 - September 2013*
  - Traded U.S. fixed income cash and futures markets using an automated statistical arbitrage trading strategy.
  - Developed trading algorithms in C# using CQG Trading API.
  - Used R to perform data analysis, build experimental trading models, and extract data from Microsoft Access database.
  - Created XML files and wrote code to serialize and transfer data between various applications.

- **Hard Eight Futures, LLC** — Chicago, IL
  *Quantitative Trader and Software Developer* — *April 2012 - January 2013*
  - Researched, developed, and traded automated applications in the U.S. fixed income cash and futures markets and U.S. equity futures markets using a statistical arbitrage trading strategy.
  - Development done in C# with Trading Technologies, TT API.
  - Applied various financial data analysis and modeling techniques to price futures markets with a term-structure, reducing dimensionality and facilitating computation.
  - Implemented and maintained a Microsoft Access database to warehouse extensive amounts of financial data.

- **Gelber Group, LLC** — Chicago, IL
  *Quantitative Trader and Software Developer* — *March 2008 - August 2009*
  - Researched, developed, and traded automated mid-frequency trading applications for FX cash and futures markets, crude oil, natural gas, corn, soybean, and wheat futures markets.
  - Utilized GVelocity a proprietary trading API written in C# to develop applications.
  - Performed various financial data analysis using Excel with a Bloomberg add-in to extract historical price data and other related financial data.

- **Gelber Group, LLC** — Chicago, IL
  *Proprietary Trader* — *June 2002 - December 2008*
  - Managed a trading account specializing in U.S. and European fixed income, equity, commodity derivatives (futures and options), and their underlying cash instruments.
  - Employed methods of relative value, statistical arbitrage, and market making to take advantage of short-term price discrepancies.
  - Utilized mean reversion and pairs trading for multi-day strategies.

– Performed daily statistics to monitor profitability and risk.

- **Group One Trading LP** Chicago, IL
  *Trader Trainee, Chicago Board Options Exchange* *January 2001 - January 2002*
    – Assisted traders with risk management activities updating delta, gamma, theta, and vega parameters and applying appropriate underlying hedge for multiple equity options.
    – Updated traders positions to reflect current market volatility estimates.

## Technical Skills

**Languages:** Java, C#, Python, SQL, R, Bourne Again Shell, Sed, Awk, Grep, HTML, XML, JSON, EXCEL

**Technologies:** Kafka, Simple Binary Encoding(sbe), flatbuffers, Protocol Buffers, JAX-RS, JAX-WS, Jetty, Netty, JMH, Trove, Docker

**Operating Systems:** Linux, Windows

**IDE:** Intellij, Eclipse, Vi, Visual Studio

**Project Management:** Git, Jira, Bamboo, Confluence, Kanban, Scrum, Agile Development

**Miscellaneous:** Excellent troubleshooting and debugging skills