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Technical Skills

Languages: Java, C#, Python, SQL, R, Bourne Again Shell

Technologies: Kafka, Simple Binary Encoding(sbe), flatbuffers, Protocol Buffers, JSON, XML, JAXB, JAX-RS, JAX-WS, Jetty, Netty, JMH, Trove, Docker, OpenRTB, AppNexus, DoubleClick, EXCEL

Operating Systems: Linux, Windows

IDE: Intellij, Eclipse, Vi, Visual Studio

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

Miscellaneous: Excellent troubleshooting and debugging skills

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.
  - Maintain real time bidding integration APIs with AppNexus, DoubleClick, and OpenRtb which utilizes HTTP protocol with JSON and Google protobuf payloads.
  - Maintain component in ad stack responsible for receiving client company/campaign data from product owners and delivering this data from Oracle database to real time bidding component of ad stack.
  - Establish and maintain new ad stack component responsible for aggregating campaign budgeting data and delivering results in real time back to bid algorithm. This component utilizes Kafka and Conversant Disruptor UDP messaging system.
- **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.

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