Matthew Trumbell

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I am a technical manager of software and IT projects with over a decade of experience delivering software, infrastructure and analysis for the financial industry. My teams deliver technology solutions that facilitate intelligent and reliable trading while effectively managing its inherent risk.

Experience

Third Stone Partners — Director of Technology (2011-Present)

Manage a four-person team of quantitative analysts, developers and consultants in implementing, deploying, and operating several large software systems while managing the firm's office and production networks and infrastructure.

- Design and implement risk management and back-office systems for commodity derivative portfolios. The system supports multiple trading groups, each with multiple traders and high daily trading volume and is web delivered, accessible from a wide range of devices. (Python, Django, Javascript, React, C++, AWS, PostgreSQL)
- Design and implement analysis and research software allowing live and historical reports, with a focus on volatility and portfolio valuation. (Javascript, React, Python, Django)
- Design and implement software that allows backtesting and running live trading strategies. Both long-dated and low latency strategies are supported. (.Net, Javascript, MongoDB)
- Create research tools for designing and evaluating electronic trading strategies. (Python, Pandas, PostgreSQL)
- Collaborate with traders to create and improve trading strategies, automate of existing trading activity, and create critical analytics for trade execution.

TradeForecaster — Senior Developer (2007-2011)

Member of a six-person development team responsible for creating electronic trading infrastructure that supported long term position and low latency trading strategies.

- Led initiative to support backtesting, research, and creation of trading strategies as well as analysis of portfolio performance over time.
- Led back office software and IT infrastructure efforts to support proprietary and commercial trading systems.
- Designed and implemented a distributed, high-capacity trading system which supported a variety of trader-configurable algorithmic trading strategies and was used daily by customers executing live and simulated trades. (.Net, Flex, Python, Django, PostgreSQL)
- Designed and implemented a low-latency, high-frequency trading system for proprietary trading. The system is currently used by traders to execute high volumes of automated trades. The system is highly optimized to achieve extremely low latency between receipt of market data and transmission of orders. (C, Win Forms, Protocol Buffers)
- Developed methods to rapidly create new strategies, backtest them over large quantities of historical market data, and optimize their profitability. (.Net, Python, PostgreSQL, Javascript)
- Created reports to visualize, analyze and optimize trading strategies. (Python, Django, PostgreSQL)

Chicago Trading Company — Development Manager (2006-2007)

Managed a five-person development team responsible for the delivery of pricing and risk assessment systems actively used by traders.

- Established and implemented development standards for the team including extensive testing requirements, consistent project structures, and thorough automation.
- Redesigned the hiring process for software, including the college recruiting process.
- Collaborated with traders to establish project goals and priorities and fostered a productive team environment, ensured the professional growth of the team.
- Increased the speed and stability of connections to the firm's pricing engine and wrapped that connectivity in a consistent and extensible API. (C++, COM, .Net)
- Developed a predictive multi-dimensional cache for option prices, dramatically decreasing the latency of option price delivery to electronic trading systems. (.Net)
- Developed software to monitor the firm's trade stream and take market action, such as updating position information at the exchange, alerting traders, and adjusting risk limits. (Java)

DRW Trading — Development Manager (2002-2006)

Managed a five-person development team responsible for the delivery of risk management systems, option valuation libraries, and analytics that was actively used by traders.

- Developed a system for making dynamic calls to option pricing models and distributing those calculations to multiple servers. (.Net)
- Created custom algorithms for calculating volatility skews, normalization of values across contracts, and yield curves derived from market prices. (.Net)
- Developed software and reporting tools to automate and streamline back-office activities. (Python)
- Designed and implemented infrastructure for collecting and managing contract, trade, position, volatility, and risk management data. (Python, .Net, MS SQL)
- Developed APIs for the firm's options models, enabling access from Orc software for live trading, from Excel and Mathematica for research purposes, and from legacy COM applications. (C++)
- Developed a live trading system for the KOSPI with Excel and exchange connectivity COM APIs.

CSS — Developer (2000-2002)

Member of a four-person development team responsible for creating real-time risk and analytics systems to support live trading.

- Developed a risk management system actively used by traders. (MS SQL, Javascript, Coldfusion)
- Implemented option pricing models based on research publications and trader input. (C++)
- Collaborated with traders to create dynamic graphs and visualization tools. (.Net, MS SQL)
- Created a database and associated automated processes to collect and store contract specifications, trade and clearing information, volatilities, interest rates and dividends. (.Net, MS SQL)
- Established software and processes for reconciliation of clearing firm data with internal position and trade data. (.Net, MS SQL)

Education

Michigan Technological University, Houghton, MI
B.S., Computer Science