Matthew Trumbell

1740 W Belmont Ave #4, Chicago, IL 60657 773.332.0150 matthew@trumbell.net

I am a developer and technical manager of software and IT projects, with over a decade of experience building software, infrastructure, and analysis tools for the financial industry. I 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 supporting several large software systems while managing the firm's production networks and infrastructure.

- Developed risk management and back-office systems for commodity derivative portfolios. The system supports multiple trading groups and high daily volume and is web-delivered and accessible from a wide range of devices. (Python, Django, Javascript, React, C++, AWS, PostgreSQL)
- Delivered interactive reporting software supporting live and historical analysis with a focus on volatility and portfolio management. (Javascript, React, Python, Django)
- Implemented software that allows backtesting and running live trading strategies. Both long-dated and low-latency strategies are supported. (.Net, Javascript, MongoDB)
- Created research tools for designing and evaluating grey-box algorithmic trading strategies. (Python, Pandas, PostgreSQL)
- Developing a system to automate the management of commodity derivative portfolios. The system handles position entry, hedging, and portfolio rebalancing according to custom analytics. (Javascript, C++, Java)
- Collaborate with traders to create and improve trading strategies, automate existing trading activity, and create analytics critical for execution in multiple markets.

TradeForecaster — Senior Developer (2007-2011)

Designed and implemented electronic trading infrastructure used to trade both 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.
- Delivered a distributed, scalable trading system that supported dozens of customizable algorithmic trading strategies utilized by customers to execute live and simulated trades. (.Net, Flex, Python, Django, PostgreSQL)
- Created a high-frequency algorithmic trading system for full-book futures strategies. The system was optimized to achieve extremely low latency between the 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)
- Designed live reporting software to visualize, analyze, and optimize trading strategies. (Python, Django, PostgreSQL)

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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 including extensive testing requirements, consistent project structures, and thorough automation.
- Collaborated with traders to establish and prioritize project goals and fostered a productive team environment, ensuring 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)
- Created 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 actions 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 position analytics.

- Developed a system for making dynamic calls to option pricing models and distributing those calculations to multiple systems. (.Net)
- Created custom algorithms for calculating volatility skews, normalization of values across contracts, and yield curves derived from market prices. (.Net)
- Delivered 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 option models, enabling access from Orc software for live trading, from Excel and Mathematica for research purposes, and from legacy COM applications. (C++)

CSS — Developer (2000-2002)

Developed real-time risk and analytics software used to manage large equity option portfolios.

- Designed a web-delivered risk management system that allowed live analysis of derivative portfolios. (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