4107 South Indiana Ave
Chicago, IL 60653
(312) 659-1980
tazimmerman@me.com
tazimmerman
TroyZimmerman
tazimmerman

Troy Zimmerman

Summary

Accomplished software engineer specializing in cross-asset trade management and risk analysis systems with exemplary interpersonal skills. Capable of handling the pressure of a trading environment while delivering robust systems and providing top-notch support.

Experience

2019–Present **Senior Software Architect**, *Jump Trading*, Chicago, IL.
Principally responsible for the architectural design & continuous delivery of the credit research & trading platform.

2008–2019 **Senior Software Engineer**, *Citadel, LLC*, Chicago, IL.
Lead the development of a lazy evaluation asset price & risk calculation framework in *Python* which provides end-of-day and real-time prices and risk metrics for a variety of credit, volatility and interest rate products. In addition to providing historical risk reporting for the fundamental and systematic businesses, this framework is also used interactively by quantitative researchers and portfolio managers for ad hoc valuations of OTC assets.

Integrated our volatility risk infrastructure with 3rd party systems such as *YellowJacket* to provide live greeks and highlight opportunities to increase/decrease risk.

Built a collection of endpoints that were standardized with *OpenAPI* and followed RESTful best practices to vend our credit product analytics as a service for use by other front office teams.

Developed a variety of processes that react to market data events (e.g. spot changes) and contribute intraday prices to the firm-wide P&L system.

Coordinated the deployment of *Prometheus* and *Alert Manager* to monitor the health, functionality and throughput of our production trading services.

Transitioned our nightly job stream to a resource-aware scheduling system capable of orchestrating tens of thousands of jobs distributed across hundreds of machines.

Managed the development of a parallel regression test harness in *Python* which reduced test run-time from days to hours and improved model delivery schedules.

Exposed many of the firm-wide *C++* libraries as *Python* modules (via *Boost.Python*) which paved the way for making web services a firm-wide standard.

Member of the Steering Committee within the firm that works towards standardizing our *Python* distribution, increasing code sharing between teams, and introducing lectures and other learning experiences by experts from around the world.

Nearly a decade of experience mentoring summer interns and recent graduate hires through production-quality projects on six-month rotations (known as the "FTAP" program). Accompanied the campus recruiting team on-site at various North American universities to conduct technical interviews of rotation candidates.

2007–2008 **Senior Software Developer**, *UBS O'Connor*, Chicago, IL.

Coordinated the integration of the straight-through processing infrastructure and price feeds with SunGard's *FRONT ARENA*. Implemented custom reports and user interfaces using *Python*, *ACM*, *ADFL* and *C++*. Developed middle-ware components transforming messages between *AMB* and *Java* message queue brokers in *C*. Integrated proprietary models with the *FRONT ARENA's* own pricing extensions. Educated front and back office users on advanced usage and best practices.

2003–2007 **Software Developer**, *UBS O'Connor*, Chicago, IL.

Lead the design and development of real-time trade management and reporting system delivered through a tiered architecture. The client was built with *Eclipse RCP* as a collection on reusable plug-ins while the server was implemented in *Java* and utilized *CORBA*, *JDBC*, *JMS* and *RMI*. The open-source FIX engine *QuickFix* was embedded with support for FIX versions 4.0 through 4.4. Users were capable of defining extensions using the *Java Scripting API* and *Pnuts*, a dynamic scripting language based on the *Java* platform. Integration with vendor products such as *FutureTrade* and *TradingScreen* were provided via drop-copy messaging.

2001–2003 **Consultant**, *UBS O'Connor*, Chicago, IL.

Provided global, around-the-clock support of a proprietary trade management system to front and back office users. Certified new and upgraded existing FIX connections with various trading venues. Performed troubleshooting of automated trading strategies driven by S-Plus analytics. Developed an IOI aggregation, reporting and signaling tool. Technologies included *Perl*, *Java*, *C++*, and the *Qt* toolkit.

2000–2001 **Consultant**, *Lucent Technologies – Public Safety Systems*, Lisle, IL.

Assisted with the migration of the 9-11 public safety access point infrastructure from Xenix to Red Hat Linux. Responsible for updating comprehensive technical documentation, maintenance of the development environments, and extensive regression testing. Technologies included *C*, *Perl* and LaTeX.

Technical Skills

Programming Languages

- Python (2, 3)
- C (11), C++ (14), Clojure
- Bash, Make, VimL

Development Tools

- Atlassian Products, GitHub Enterprise
- Redis, Influx, SQL Server
- NumPy, Pandas, Arrow, Parquet

Hobbies & Interests

- Animal rescue volunteer
- Urban farming and sustainable living
- Horology nerd
- Functional programming enthusiast