Jay Y. Berg
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SUMMARY

A lead software engineer and architect with 20 years' experience delivering complex solutions in financial technology, latency sensitive trading system, and blockchain protocols, by producing clean, maintainable, and readable backend code, in large scale environments for both green field and established codebases, utilizing C++ and other backend languages. Seeking position to utilize skills to deliver software solutions.

PROFESSIONAL EXPERIENCE

Founder - Core Developer **SIDEPIT** Berkeley, CA 2021-2023

Researched, designed, and coded multithreaded C++ core with CLI and APIs for desktop UI and web application clients. Delivered MVP for decentralized exchange protocol.

Sr Software Engineer **VMWARE** Palo Alto, CA 2019-2021

Coded C++, Golang, Python for Hyperledger Fabric engine integration for Concord blockchain enterprise SAAS project.

Founder - Core Developer **PROTOBLOCK** San Francisco 2014-2019

Lead developer for green field blockchain for fantasy sports trading protocol. Coded portable C++/QT core, complete with crypto wallet UI for windows, osx, android and ios, through production launch. Also, developed and launched APIs for light client web applications, as well as an MVP for bitcoin atomic swaps.

Consultant / Head of Professional Services **NEWBERG / QUANT HOUSE** San Francisco / New York 2007-2014

Factom Project – month to month contract – 2014 - remote

- Coded core open-source backend blockchain protocol in Golang

Coinsetter (Kraken) Exchange – 12-month contract – 2013 - on site - New York

- Coded core exchange matching engine in Java, produced low latency production system with fault tolerance with multi-threading and high-performance architecture to support high-frequency bitcoin trading via Spring based rest APIs.

Vardon Capital - contract – remote - 2010-2012

- Designed and coded end-to-end production trading framework in C#/.NET for hedge fund conversion from manual to full automation. Produced a grey box interface for traders to enable semi-automation via real-time monitoring and dashboards via QT interface. Produced custom aggregated market data across 13 exchange feeds, as well as distributed low-latency execution system in multi-threaded C++ with connections direct market access to exchanges for trading.

Quant Capital– contract – on site – New York - 2010

- Delivered system architecture solution for quantitative equity arbitrage startup fund. Supported Quants analysts with alpha model research. Performed buy-vs-build analysis of OMS/EMS, risk, feed-handler, tick-db, CEP and middleware solutions. Lead developer team in a C#/.NET with SQL Server environment.

Hellespont Capital Management– contract – hybrid remote/Chicago - 2009-2011

- Delivered an abstract OMS solution for use in alpha and execution strategies and implemented DMA FIX and Consolidated US equity feeds in C#/.NET.

Ronin Capital Management - contract – hybrid remote/Chicago - 2008-2010

- Delivered a complete solution for automated intra-day futures spread market making strategy, via implementation of Wombat gateway to CME via coding solution in C#/.NET, C++/STL, utilizing low level threads and sockets.

Sr. Quant Developer	**FORTRESS INV. GROUP**	New York	2006-2007

Delivered a C++ event stream processing (ESP) engine for production monitoring and communication of an established large scale production low-latency, high-frequency trading operation for multi-billion-dollar hedge fund trading strategy. Coded multithreaded C++/STL using boost and object-oriented TCP/IP sockets.

Auto Trading Systems *Securities Broker* *Commodities Broker* *Commodity Pool Operator*	**ML STERN** **PIXLEY GROUP** **PHEONEX GLOBAL** **BUTTERFLY CAPITAL**	San Francisco / New York	2001-2006

Researched and implemented production systematic trading models for fixed-income futures, equity index futures and equity trading. Coded C++/STL and easylanguage. Operated commodity pool for high net-worth investors. NASD registered series 3, 7, 55, 63.

Sr. Software Engineer **TRADING TECHNOLOGIES** Chicago 2000-2001

Delivered Island ECN gateway utilizing multithreaded VC++ on NT using TIBCO, TCP/IP, with OOD and FIX protocol as a new feature for X-Trader API electronic futures, options and equity exchange access, to facilitate clients for high frequency and algorithmic trading.

Programmer **BLOOMBERG L.P.** New York 1997-1999

Contributed new products to suite of analytical software for the Bloomberg Terminal. Coded backend, server-side algorithms for technical analysis charting client screen, in C, Fortran and Perl on UNIX.

EDUCATION

MS Financial Engineering **City University of New York / Baruch College** 2004-2006

Courses: Time-Series Analysis, Structured Finance, Stochastic Finance, Numerical Pricing Methods, Derivative Pricing Models in C++

Bloomberg Training **Bloomberg LP** 1997

C/Unix, Fortran, Equites, Derivative Pricing, Fixed-Income, FX, Trading, Quant Finance

BS Computer Science **Brooklyn Touro College** 1994-1997

TECHNICAL SKILLS

Coding: C++, QT, QML, C++11, C++17, C, Java, STL, Fortran, C#, Golang, Python, VMware, AWS, Docker, Jira, Agile, OOP, Templates, Boost, 0MQ, CMAKE, .NET, WPF, Design Patterns, OOD, Linux, NodeJS, MatLab, Perl, TIBCO, SQL

Financial APIs: FIX, Bloomberg, IB, Lime, Wombat, ITCH/OUCH, QuantHouse, X-Trader, BATS, ARCA, Island, TrayPort

Domains: Bitcoin, Blockchain, Web3, Decentralized Exchange, Smart Contracts, Execution Systems, Order Management Systems, Portfolio Management Systems