

IONEL VASILESCU

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OBJECTIVE

Seeking to apply my skills and experience for maximum impact, to share my knowledge with other team members and to improve myself by learning new technologies, processes and subject matter.

EDUCATION

Bachelor's, [Math and Computer Science](#), [U of Illinois at Urbana/Champaign](#)

SKILLS

- Primary Programming Skills: C++, OOD/A, design patterns
- RDBMS: Microsoft SQL Server, Sybase & MySQL
- SDLC: Wrote requirements for small to large projects
- Capital Markets: US/CA markets, FIX/binary, TBF/ITCH feeds
Front-/middle-office P&L recon, risk monitoring, ETF decomp
- Client/server technologies: HTML, CSS, JScript; ASP, PHP; Solace
- Scripting/other: Perl, Python, awk, bash, github, JIRA, Jenkins, Java
- OS platforms: Windows, Linux

WORK EXPERIENCE

RBC Capital Markets, Toronto ON, Jan 2018 - current

Senior Software Developer : C++ development of low-latency order entry on Win/Linux

Projects: Canadian/US equity/derivative order routing/management

Responsibilities: Design, develop, unit test and deploy software for our front office and middle office.

Technical accomplishments: C++ dev on Linux for low-latency order entry connectivity (using FIX and binary protocols, e.g. [TXSE SEED/RAKE](#)) for equities and futures (e.g. BARX/[THOR](#) algos, US+CA venues, [ITG SOR](#)), RFQs (e.g. [Tradeweb](#), [TruMid](#)), FX (e.g. [Fastmatch](#)) and bonds (e.g. [Tradeweb](#)). [CAT](#)-related additions to C# GUI and C++ Server apps for capturing trades. Mod'ed Perl modules for [OATS](#) reporting and aided transition to CAT. Migration of manual process Sybase DB account record updates to automated Solace feed provisioning. Decomp of ETFs (including funds of funds) using scripts, SQL Server queries and C++. Team lead for a small dev team.

Training: Reg/Compliance/AML/etc modules, Wall Street Prep's Derivative Life Cycle, XVA and Counterparty Credit Risk, [Low latency](#) techniques, [C++23/26](#) features.

Canadian Pension Plan Investments, Toronto ON, Nov 2015 - Jan 2018

IT Specialist: VC++ middleware development; Python/OneTick/scripts/mysql on Linux

Projects: **FIX Engine C++ library, Compliance Engine, Short Sell Marking, OneTick**

Responsibilities: Design, develop, unit test and deploy software for our front office and middle office.

Technical accomplishments: Developed multi-threaded high-performance C++ library that provides C++ clients a FIX interface to Itiviti/Cameron's [Catalys](#) Node FIX engine (Java-based). Developed Compliance Engine application (and client API) that connects front office C++ and VBA clients to Bloomberg's Compliance Manager module via Bloomberg's FIX [AIM](#) interface. Developed Short Sell Marking application (and client API) that provides long/short marking of global equity sell orders for the front office C++ clients (via sockets) by reading from inventory systems (via multicast and SQL queries). Developed OneTick loaders for FIX FX streaming quote logs and split [OneTick's BPIPE](#) collector into separate collectors (one per asset class) by enhancing the BPIPE ticker/field subscription to use MySQL DB for easy client input (using Python bridge).

Training: CSC's Derivatives Fundamentals Course.

TD Securities, Toronto ON, May 2010 - Nov 2015

Senior Software Engineer: C++ middleware development on Windows & Linux

Projects: **Canadian/US equity/derivative order routing/management**

Responsibilities: Design, develop, unit test and deploy software for equity/derivative order routing; business analysis for order routing and post-trade applications; lead small team of developers

Technical accomplishments: Developed C++ software that routes equity and derivative orders between clients and markets with persistence/recovery to/from SAN file system and SQL DB. Wrote modules for a smart order router application that manages real-time Canadian market feeds (using NYSE's Wombat/MAMA with Tibco Rendezvous middleware) and routes orders via FIX connections to Canadian markets (TMX, CHI-X, Pure, Aequitas, Omega, TriAct; MX). Wrote TBF and NITCH feed processors and STAMP to/from FIX converter applications. Assisted production management team with deployments, provided support to our clients and internal risk monitoring team.

Training: Business Analysis Essentials, High Impact Coaching, Finance Essentials, various compliance modules (security, privacy, AML, etc).

Infinium Capital, Toronto ON, Jun 2007 - May 2010

Senior Software Engineer: VC++ GUI/middleware development on Windows

Projects: Custom arbitrage trading strategy engine and risk monitoring tools

Responsibilities: Design, develop, unit test and deploy software in rapid cycles. Tech lead on rapid-turnaround projects.

Technical accomplishments: Developed VC++/MFC/STL/boost software that manages market feeds, orders, trades and implemented arbitrage trading engine. Augmented exchange simulator with market data feed and ADO-based MySQL connector. Wrote C library to provide socket-based interface to strategy logic layer. Wrote multicast client/server for processing market feed data. Wrote Perl scripts to parse quote/trade logs and validate strategy logic.

Wrote Bloomberg and RealTick API application/script DTS suite for processing LIBOR rates and Merrill Lynch Clear reports and loading the processed data into a MySQL database. Contributed to DB schema design and implemented middleware software for providing cost analysis features in a risk monitoring system. Wrote software that tracks risk and profitability in various equity, equity basket and equity option strategy portfolios.

E*Trade, Toronto ON, Nov 2006 - Jun 2007

Software Engineer : C++ middleware development on Solaris 5.x

Projects: FIX Server and CMS Server

Responsibilities: Design, and write requirements. Develop software. Support production deployments.

Technical accomplishments: Developed CMS and FIX protocol 4.x data processing software using C++ and Sybase SQL queries. Modified QT test suite for FIX counterparty simulation.

Training: Financial markets basics.

REFERENCES

Available upon request.