CV

Name and Surname

Piotr Gregor

Age: 29, nationality: polish

Education

Poznan University of Economics, **Informatics & Econometrics**, specialization: **Financial Engineering** 2009-2011, master
Poznan University of Economics, **Informatics & Econometrics**, specialization: **Financial Engineering** 2006-2009, bachelor
V Liceum Ogólnokształcące w Zielonej Górze (Exact Science profile) 2001-2005

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Overview

C++/C/C# programmer with strong math / financial engineering / risk / markets / trading background, Windows, UNIX, Linux

Skills & technologies/libraries

C++/C, C++98, **C++03**, C#, .NET, **QuantLib**, **boost**, **STL**, **GPU NVIDIA CUDA**, Design Patterns, VCS, NLOpt, **Qt**, networking, sockets, pipes, TCP/UDP, **multithreading (POSIX threads)**, **Algorithmics Risk++**, **GPU**, **FPGA**, **VHDL**, Boolean logic, GPS, FileZilla FTP, **derivatives**, trading/risk management, **math**, **statistics**, **econometrics**, **probabilistics**, **HFT**, low latency, **MT4**, **MySql**, **Glassfish/Tomcat**, **JavaServerFaces**, **Bind9 DNS**, **sendmail**, Windows Server, ASP.NET MVC, Windows Forms, Linq, SQL Server

Work experience, courses and training

C++ developer-Transition Technologies

07.2013 – currently: development of platform for Electric Energy trading and risk management, Linux

C++ algorithmic trading developer-prop trading

05.2012 – currently: I have been given the opportunity to develop my system (stored on VPS) and trade remotely using some Hedge Fund's API, using socket based high-speed data exchange/orders routing protocol. Working on this 6 months. Then I started to develop my own C++ trading client on Linux using C++98, CUDA GPU, QuantLib, Boost, STL. Only testing ideas with IB (TWS API) and preparing to next integrate with FPGA and faster APIs and to co-locate my application.
Simultaneously involved in open source projects: QuantLib, IB TWS API, Boost, and other. i.e. I helped to correctly implement Brent solver in QuantLib. link

.NET software developer – Fun And Mobile

11.2012 – 04.2013, (contract): MSVS2012, .NET Framework 4.5, SQL Server 2012. development of the standalone part of system that allows mobile users to retrieve the information about cheapiest air connections and to book the ticket (for Denmark company Infare).
example tasks:

- developing authentication mechanism to validate http requests (HMACSHA256 hashing) coming from the network (so only our iOS app is allowed to use web services exposed by this system)
- reset password process, random password generation, hashing, sending confirmation email
- finding a way to contradict a specification, so we can request data from repository which simply doesn't meet specification (lower level lambda expression)

C# software developer – Komornik.IT

08.2012 – 11.2012, (contract): software development using MSVS2012, .NET Framework 4.5(2.0), SQL Server 2012(2000), SQL Server Management Studio,

Windows Forms and ASP.NET applications, TFS, Win7, Windows Server 2003 R2
example projects:

- SQLZestawienia: this application provides UI to interact with SQL Server 2012 database through windows forms and to create customizable queries and reports with interactive SQLHTML editor and dynamic text analyzer (connecting html content with SQL query to feed command's parameters with values supplied by user through UI). dynamic menu has been organized in a way that allows administrator to easy drag'n'drop positions, make them available or disable them to the given user, create and delete new queries for users (insert simple query or a new node) by handling events of the tree view with image drag methods imported through comctl32.dll. running with SQL2012 but also SQL2000 on Win7 and Windows Server 2003 R2, .NET 4.5(2.0)

Programmer – Deutsche Leasing Polska

02.2012 – 06.2012, (contract): C#/SharePoint. Supporting the IT team with system migration to Charisma ERP. Testing functionalities, tests creation in HP Quality Center. Some hardware related tasks (printers, servers, internet connections, C# app which presents info about the staus of printers in company)

Developer/quant–BWConcept(introducing broker):

09.2011 – 12.2011, (contract): C++/C#, VB, MQL(for MT4 FX platform) programming: trading strategies implementation and development (exploiting arb opportunities, statarb strategies). Market analysis.

Junior specialist, C++ system developer – Market Risk Department PKO BP S.A. (Bank):

07.2010 – 08.2011, (permanent, full time): working with Algorythmics Algo Suite system for risk management (UNIX/Solaris, Windows), C++(NetBeans), VB, RWS (RiskWatch Script) programming: new solutions implementation (risk measures, stress tests, volatility surfaces transformation, FX options delta calculations coding with respect to spot/fwd, premium adjusted, etc. convention) and maintenance of existing ones. Building analytical solutions in system, e.g. linking .Net and Excel: creating dll using QuantLib open library with C++ in Visual Studio and implementing it in MS Excel
libraries:
- boost, stl, risk++(Algorithmics lib), QuantLib

elements of:
- JAVA, PL/SQL (Oracle), bash, Python, technologies: ADO.NET

examples projects:

1. review of the C++ code for the WDO calculation – removing bugs and implementing new approach, changing code structure and adding new functionalities – existing class extension (new members and functions)
2. FX options volatility surface transformation: it required to build totally new classes which main task was to create strike-term surface from the delta-term analog in the Risk Watch application. It involved use of the STL, Risk++ and finding analytical solutions for strike calculations: I've implemented some methodology from QuantLib using risk++ classes and occasionally taking advantage of the Algorithmics help by SR (Service Request)
3. creating stress test scenarios in Excel using VBA with csv as the output, then importing it to the Risk Watch by the rws (RiskWatch script) during session process (adding new script to the main session script)

other skills used in this job: understanding of probability theory, stochastic processes, and PDEs. (occasionally) some econometric modelling and applied statistics (i.e. - Time Series, GARCH, regression, volatility, etc.).

FX market analyst - DM TMS Brokers S.A. (intern):

10.2009-11.2009, market analysis, reporting, econometric modeling, VBA(coding macros according to daily needs)

Ececution Trader - TWL Capital Sp. z o. o.

(intern): 09.2009-10.2009, automated systems programming on TradeStation (EasyLanguage) and with VBA, trades execution on futures on Bund, Deutsche Borse Eurex

Polish Finance Ministry (Departament Długu Publicznego Min. Finansów RP)(intern)
(m. in. Wydział Operacji Rynkowych): 08.2009,
debt market analysis, working on the budget plan of financial needs in the September of 2009

Dealing Room - Bank BZWBK S.A. (intern)
in Poznan:08.2008, FX dealer assistance, bank FX exposure monitoring

Organizations/certifications

IKM C++ test Backend Engineer V2 – Remote – scored 94/100, May 2013 link
IKM C++ test – scored 92/100, January 2013 link
IAFE – member
Interactive Brokers TWS API – contributor to yahoo group, member of github project
QuantLib – contributor to C++ project
UniTouch – self progress course of Bank Pekao S.A.
Międzyuczelniane Forum Dealerów Bankowych 2011 (Interbank Dealers Forum) – certificate of ACI Polska
Derivatives World Central & Eastern Europe, Warsaw 2011 - participant
Academic Earth (Physics I, Linear Algebra, Stochastic Calculus) – Stanford, MIT online courses
Reuters - **Data Retrieving and Analysis**
THOMSON Reuters Markets Academy – certificate with destinction
Bloomberg - Basic navigation
Bloomberg - FX and Macroeconomic Analysis

Publications

Streszczenie i opis artykułu autorstwa Shang C. Chiou, Ruey S. Tsay: "A Copula-based Approach to Option Pricing and Risk Assessment" -> (link)
academic paper, May 2011, a summary of Shang C. Chiou, Ruey S. Tsay, [2008], „A Copula-based Approach to Option Pricing and Risk Assessment", Journal of Data Science (6), p. 273-301

Master Thesis

"C++ in financial engineering: high speed computing using GPU and FPGA"

Bachelor Thesis

"Currency spread trading using cointegration theory"

Languages

english – advanced, french – beginner

Interests

FX market, math, derivatives pricing/trading/hedging, C/C++/VHDL, internet, networking, security, APIs, automated systems, HFT, low latency, high speed, financial engineering, arbitrage, algorithms, statistics, econometrics, probabilistic, physics, Taleb Nassim's workpapers about dynamic hedging & randomness, Derman Emanuel's papers (Goldman Sachs Quantitative Strategies Research Notes), chess, football, other sports, music