Rajat Girotra

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**Financial Software Developer**

Software Engineer adept at application development, testing and optimization. Excels at **C++** software development, **low latency programming**, including coordinating ground-up planning, programming, implementation and maintenance of core modules.

**AREAS OF EXPERTISE**

* C++ (STL, templates), **C++11**
* **ION Marketview platform**
* Template Metaprogramming
* Interface design and implementation
* **BOOST C++ libraries**
* Agile development methodologies
* Market Connectivity
* Unix/Linux
* Java
* Oracle SQL
* Scripting (python/bash)
* Derivates market (Futures & Options)
* Fixed income & Money markets.
* FX markets

**Experience**

**Standard Chartered Bank – Singapore** **March’ 2013 - Current**

*Software Engineer – Financial Markets*

I am working with the FX-eCommerce team. My work involves development of bank's internal system for pricing, trading, booking & STP of FX trades & Money Market time deposits for our Wholesale Banking clients belonging to multiple client segments.

**Projects**

**Buyside market connectivity**

I was involved in end-to-end development/integration of FXConnect platform with Standard Chartered’s in-house Order Management System (OMS). The project involved providing FX Pricing (Spot, Forward, NDF’s and Swaps) and trade import of done trades into the bank’s books. The project involved working on **FIX protocol and JMS based messaging queues**.

**S2BX-EBBS Integration**

The bank's core banking solution (EBBS) was integrated with the front-office S2BX application   
allowing deposit transactions to be initiated from S2BX and STP'ed to EBBS for booking and   
settlement. I was involved in development of core modules like trade initialization, trade capture   
and STP to back office system. **IBM MQ's** were used as a link between front and back-office.

**Dealer Intervention**

I developed the core dealer intervention module for the bank’s S2BX platform; which is a real time way to request for tradeable deposit rates when they are unavailable. A deposit quote has to go through different pricing workflows involving multiple parties like Sales, ALM desk and others before a rate is quoted to a client. Boost MSM (Meta State Machine) was used to implement this quote requesting feature.

**ION Trading - India**  **Jan’ 2009 – Feb’ 2013**

*Team Lead – R&D*

**Projects**

**XTP Re-engineering**   
XTP was a re-engineering project developed by ION. The old ION back office system(s), were   
being reworked using Java and the **ION platform (MarketView)**. It was a complete accounting

and management system for use by traders and brokers of futures and options. The project   
used information that was entered via feeds (or manually) and produced End of day (EOD)   
results based on algorithms applied by exchanges (delivery, exercises, assignments, closeouts,   
margin calculation etc). The project integrated with other ION products to produce   
customer/user reports for EOD regulatory reporting as well.

**Margin Module**

As a technical lead/mentor, I was leading a Back Office team of five engineers.  
My work involved development of Back Office Systems for derivatives markets (Both Exchange   
Traded and OTC).

Major part of my work involved understanding of functional specification and writing technical   
specifications for implementation of algorithms for calculation of margin figures, Profit & Loss   
statements, Mark to Market and Variation Margin for future & options trades for our clients   
who trade in more than 70 future and options markets around the globe.

I have experience with various margin algorithms like **CME-SPAN, TIMS, Eurex Risk based   
Margining, LCH-SPAN** etc.

**Responsibilities**

* Documentation, implementation, unit testing, taking our features into production,

maintenance & support of our work.

* Providing out of office hours support on critical client issues.
* Working closely with the BA's & the testing team to help them setup their environment for testing.

* Interviewing candidates for new job opportunities.

**NXP Semiconductors – India**   **Aug’ 2006 – Dec’ 2008**

*Senior Software Engineer - R&D*

I was working with the development team for Set Top Boxes (STB's).

**Projects**

**Porting of STB API's**  
I started off with porting of the STB driver API's from Nucleus to Linux operating system. This   
activity helped me in gaining an insight into the Linux Kernel; understanding Linux User and   
Kernel Space; how memory is managed; how to program kernel modules; and other intricacies   
involved.

**Device Driver for De-multiplexer**  
Later I went on to support all phases of development of de-multiplexer (demux) device driver of   
Set Top Box. I was involved in accessing client needs, planning and implementation of features   
from initial conceptual design through coding, and final delivery. This activity helped me in   
thoroughly understanding the MPEG-2 Systems Layer; PAT, PMT, NIT,  
PES syntax and structure along with DVB & DTV standards.

**Stablization of Audio-Video Sync**I worked on the Display Subsystem of Set Top Box; primarily on stabilizing clock recovery and   
Audio/Video Sync issues for all types of Interlaced and Progressive streams. I have a good   
understanding of HD/SD, NTSC and PAL standards.

**Motorola India Pvt. Ltd. - India**  **Sep’ 2005 – Aug’ 2006**

*Software Engineer - Development*

My work involved development of various application modules of Set Top Box such as Front   
Panel Displays, On Screen Diagnostics (OSD) and Conditional Access. I programmed in C++ and   
used Rational Rose UML for my designs and use-cases.

**Accomplishments**

* Proven track record of delivering solutions end-to-end and taking on responsibility and   
  ownership.
* Bagged many accolades & awards from my peers and managers for good work.
* Visited London and US for supporting critical releases and designing complex features.

**Education Qualification**

* Bachelor of Technology: Computer Science (72.5%), 2005 from Amity School of Engg. & Technology. － New Delhi,, India.
* Class XII from New Era Public School, New Delhi – 82.3%.
* Class X from New Era Public School, New Delhi – 85.4%.