Pratik BORHADE

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EDUCATION

TELECOM PARISTECH
M.S. Multimedia in Information Technology
2011-2013 | Paris, France | Cum. GPA: 3.92/4.00

UNIVERSITY OF PUNE
B.E. in Electronics and Telecommunication
2006-2010 | Pune, Maharashtra
First Class with Distinction

SKILLS

PROGRAMMING LANGUAGES
C++(98/11/14/17), C#, Scripting (BASH, PowerShell), SQL, Python, Scala

COMPILER AND TOOLS
Visual Studios, gcc, g++, gdb, .Net framework

VERSIONING TOOLS
GIT, SVN

DATABASE
Oracle, HBase, Phoenix

SOFTWARES
Sophis, MS Office

OTHER LIBRARIES AND TOOLS
Hadoop, Standard Template Library, Boost, WPF, Winforms, Glowcode Profiler

OPERATING SYSTEMS
Linux, Windows

LANGUAGES
English - Full Professional Proficiency,
French - Intermediate,
Marathi,
Hindi

EXPERIENCE

NATIXIS - IT Quant Consultant
Nov. 2017 - Present | Paris, France
Team : Global Markets Equity IT Quant
Natixis is a corporate and investment bank. Our team is responsible to implement and maintain pricers for sophisticated derived instruments. My key responsibilities and achievements are as follows.

1. *Hadoop*

   - Created a rich, easy-to-use library in C++ for **Apache Phoenix, Hive** with power of template metaprogramming. It helped my team to easily put in place various projects which uses these technologies.

   - Doing pre-processing and post processing on the financial data using **Spark**. Package was written in Scala.

2. *Credit Value Adjustment and Expected Effective Positive Exposure*

   - Developed and maintained project to calculate CVA and EEPE in collaboration with Quantitative Team.

   - Planning and **brainstorming the architecture** for the ecosystem for calculations.

   - Designing tables for Apache Phoenix to store calculation data.

   - Writing **documentation and flowcharts** to help the support team put the ecosystem in environments of User Acceptance Test(UAT)and Production.

   - Writing python script to analyze the state of ecosystem and automatically send **daily reports**.

3. *Stress Tests*

   - Optimizing communication between Stress Test servers (Master-Slave architecture). I successfully **improved memory consumption by a factor of 10**. This was done by finding strategies to remove redundant information and aggregating important data to send it once.

   - Integrating CVA and EEPE calculations in Stress Test.

4. *Others*

   - Most of the projects work around **Sophis**. I have worked a lot with toolkited instruments, scenarios, market data, dialogs.

   - **Optimizing** existing code for time and memory, by profiling techniques and analyzing code for potential improvements in algorithms and memory leaks.

EXPERIENCE

FINASTRA (FORMERLY MISYS) - SOFTWARE ENGINEER
Feb. 2014 - Nov. 2017 | Paris, France | C++, C#

Misys is a software editor with multiple solutions targeting banks and financial institutions. Our team was responsible for developing and maintaining core functionality of portfolio management for product 'Fusion Invest / Sophis Value'. Fusion Invest is used by many financial institutions and bank to manage their portfolios, funds and create sophisticated derived instruments. My responsibilities were as follows.

- Working on development of new features related to **Portfolio Management, Fund Management (Internal/External), calculations of P&L and Greeks**.
- Developing new features and maintaining existing ones. Development of the application was done in various languages like **C++, C#**, managed C++ and powershell scripts.
- **Performance** is a critical requirement for the application. My major task also included algorithm development, re-factoring and resolving performance issues.
- Designing and improving graphical user interface (GUI) using WinForms, MFC and Devexpress library in C#.
- Acquired proficiency in **template metaprogramming**, Standard Template Library (STL), Design Patterns, Software Architecture, Unit Testing and Boost while working here.

AMADEUS (CAPGEMINI) - SOFTWARE ENGINEER
Jan. 2013 – Feb. 2014 | Nice, France | C++, Linux
Worked with Amadeus, a client of Capgemini, which is a Global Distribution System (GDS) for airline industry. Our team was responsible for development and maintenance of the servers which processed the payments.

- The role included development of backend in **C++** and BASH. The development was done in Eclipse IDE and **Linux** .
- Worked on Distributed Systems developed by Amadeus using **memcached** and server farms.
- Acquired proficiency in **Distributed Systems**, Standard Template Library (STL) and Design Patterns.

ORANGE LABS - RESEARCH INTERN
Jun. 2012 – Dec. 2012 | Nice, France | C++, Objective C
Jun. 2012 – Jan. 2013 | Sophia Antipolis, France
Responsible for the implementation of an Augmented Reality (AR) application as a research intern. Learned and implemented concepts of MVC design pattern, Multi-threading(POSIX), Networking, IOS programming. The code was implemented in C++, Qt and Objective C language.

MASTER THESIS Telecom ParisTech | C++, OpenCV
Automated the trajectory of AR Drone Parrot (UAV) using image processing techniques. The main challenge in this project was to enable the image processing algorithms to work in a real time scenario while controlling drone in 4 dimensions. The first step was to fetch images from the wireless network of the drone. These images were processed simultaneously using multiple threads to calculate the control parameters. The project was implemented using the image processing library OpenCV.