Andri Rakotomalala

Software Engineer, Fullstack developer & Tech Leader, specialized in .NET+javascript

13 years of experience in enterprise applications, including 8 years in finance

Summary

Multitechnology developer specialized in .NET(C# or F#) + javascript(reactjs or angularjs) offering over 13years of experience in building simple yet maintenable and testable enterprise applications.

As a result of my various work experiences and my excellent general knowledge in IT, I can easily and quickly adapt myself to a new technical environment, allowing me to provide effective results in a short timeframe after the start of a new job.

Education

2005 INSA de Lyon – Master's degree in engineering in Computer Science
2000 French Baccalauréat in science with honours

Languages

French: native
English: proficient

Skills

Financial Markets Advanced knowledge of Commodities and derivatives, Greeks, risks, VaR
    Basics in stock markets
Software engineering Architecture
    Writing technical and functional documentation, user acceptance tests
    TDD, BDD, unit tests and refactoring of legacy code that has a lot of technical debt
    Functional programming
Technologies Client : WPF, Windows Forms, jQuery, ReactJs, AngularJs, html/css
    Languages : C#, F#, VB.NET, java, SQL
    Databases : MSSQL, Oracle, Sybase ASE, Cassandra

Work experience

Société Générale CIB   05/2016 - today

.NET Technical Leader for the commodities department (SGCIB/CTY) of the Société Générale

I was called back to SGCIB/CTY to help on the FRTB project (Fondamental Review of the Trading Book). FRTB (aka Basel III) is a set of laws that will define the new market risk capital rules, starting from Jan 2020. These new rules would require 10x more computations.

Strong technical and functional challenges to adapt the legacy risk computation engine in order to be scalable.

Achievements:

- Member of the chapter *Software Craftmanship*
- Member of the transversal guild of Tech Leaders
- Staff recruitement
- Progressively changed the existing engine to be adapted to new paradigms (dynamic VaR scenarios depending on the financial product)
- Started implementing a simpler functional architecture (1 given input => 1 predictable output)
- Decoupled components and services
- Chose and introduced more recent technologies that still respects the existing architecture:
  - NoSQL – Cassandra
  - Monitoring – stack Grafana+InfluDb+AppMetrics
  - Microservices – consul.io, traefik

Technologies: SAFe methodology, C#, VB.NET, Sybase, MsSQL, Cassandra, MongoDb, Symphony (grid computing), git & teamcity, consul.io & traefik, InfluxDb

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BNP Paribas CIB   05/2014 - 05/2016 (2yr)

Lead Software Dev in .NET, java, AngularJs for BNP Paribas Compliance (GECD/MGA)

Big technical debt. Rewrote and maintained various apps: insiders tracking; position followup; trading restrictions.

Achievements:

- Helped to rewrite the *short-sales* application (java):
  - Brought simple technical recommendations
  - Rewrote a batch (daily notification mail alerts)
- Modernized a legacy app (position tracking):
  - Reverse-engineering
  - Rewrote and optimized the different calculation modules (~1.5millions of lines to calculate in a few minutes depending on country specific rules)
  - Pushed for a test-centric BDD approach with SpecFlow
  - Modernisation of a website (from asp.NET/vb.net to angularjs/bootstrap-css/odata/C#)

Technologies: C#, VB.NET, java, bootstrap css, angularJs, reactjs/react-native, javascript/typescript, Visual Studio, vscode, eclipse, jenkins

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Société Générale CIB   08/2011 - 05/2014 (~3yr)

.NET Developer for the commodities department (SGCIB/CTY) of the Société Générale

Complex technical environment where we needed to find the right balance between respecting the existing legacy code, and the willing to innovate.

Maintained tools for the *Front Office*:

- Pre-trade pricers: shows greeks, live market data for a set of given product characteristics
- Meteor Risk Management : Distributed Grid computation (valuation, greeks, VaR) for the whole perimeter of CTY – 8 million individual deals accross different business lines (metals, agricultural, energy, exotic and indexes) and various product types (vanilla or exotic).

Achievements:

- Changed or implemented new indicators (Explained PnL, theta, new date calculation rules, etc.)
- Debugging and explaining calculation discrepancies (change in the referential, caching errors, incorrect market data, referential changes)
- Explaining performance degradation
- Wrote a result comparer to automate integration tests and simplify the UAT manual tests
- Have been the first to try to implement unit tests on legacy components (reached 65% coverage on simple components)
- Refactored some basic libraries with dependency injection

Technologies: Agile, C# (45%), vb.net (45%), vb6/com (10%), .net 3.5, windows forms, wcf, microsoft unity, nhibernate, sybase 12, SQL Server 2008, ado.net, Symphony (grid computing), team foundation server

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GFI Informatique   03/2010 - 06/2011 (~1yr)

.NET and java consultant

- Assisted the sales team to answer coherently to call for tenders (sizing, impact identification, advised on system architectures)
- Wrote coding guidelines and best practice reccomendations for junior developers in order to provide a consistent quality to clients
- Implemented from scratch a build server based on TFS
- Code audit (performance, security, coding tools)
- Prototyping

Technlogies: java/j2ee, jboss, Oracle 9i, Adobe Flex 4, blazeds, hibernate

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Amadeus IT Group, SEP department (Sales and e-commerce platforms) 09/2005 - 02/2010 (~4.5yr+)

Java/javascript developer

- Responsible for the maintenance of the following modules on the B2B point-of-sale solution: Passenger record, Pricing record, and Queues
- Maintaned and wrote some basic server-side java beans

Product definition

- Wrote use-case specifications, using the requirements given by the Product Management and the Marketing department
- Identified impacts on the system; followed the progression of the development
- UI mock-ups
- Presented the new features
- Functional tests before handing the software to the QA team

Technologies: java/j2ee, xml/xsd/xslt, html/css, javascript, edifact, Visual Studio, Eclipse, Rational Rose, JBoss