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 maintainable and testable enterprise applications.

- Comfortable with a wide array of IT technologies and languages
- Top technical skills in .NET
- Focused on delivering simple yet maintainable and testable applications on time
- Experience with working on a long project with multiple team interactions, in agile mode
- Experience with maintaining large and complex enterprise applications
- Able to bring a new life to legacy software that had a lot of technical debt
- Strong ability to quickly adapt to new technical environments
- Full professional proficiency in French and English

Education

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

Languages

French: native
English: full professional proficiency

Skills

Financial Markets Good 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, javascript/typescript, java, SQL
Databases : MSSQL, Oracle, Sybase ASE, Cassandra

Work experience

Boston Consulting Group

Senior AI Software Engineer

Bringing data science projects beyond the PoC stage and transforming them into full-fledged products.

> **Technologies**: AWS and Azure, cloud architecure, Python, Typescript, scalable databases, docker, kubernetes

Glencore UK Ltd - Front Office   06/2019 - 09/2019

Senior Software developer in .NET, angular, python

Senior developer responsible with a group of four developers for the maintenance and evolution of Whiteboard, a desktop software that displays/edits analytical data on vessels/cargoes/refineries/stocks worldwide

> **Technologies:** C#, Winforms+DevExpress, .NET Core 2.2, angular 7, MsSQL, python

---

Société Générale CIB / CTY, Commodities trading desk   05/2016 - today

Lead Software Development Engineer in .NET

I was called back to SGCIB/CTY to kickoff the FRTB project (new set of rules for capital requirement from the Basel Committee).

Strong technical and functional challenges to adapt the legacy risk computation engine (1300+ nodes) in order to be scalable (20x more computations than the traditional VaR).

Achievements:

- Member of the chapter *Software Craftmanship*
- Member of the transversal guild of Tech Leaders
- Staff recruitment
- Progressively adapted the existing engine to new paradigms (VaR scenarios now depends on the product characteristics), and helped implement the Internal Models based approach, the Expected Shortfall
- Started implementing a simpler functional architecture (1 given input => 1 predictable output)
- Demystified, decoupled, optimized the legacy grid-based risk calculator (1300+ nodes)
- Introduced more recent technologies that still respects the existing architecture:
    - Big Data – Apache Cassandra
    - Monitoring – Grafana, InfluxDb, AppMetrics and health checks
    - Microservices architecture – consul.io, traefik

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

---

BNP Paribas CIB – Compliance (GECD/MGA)   05/2014 - 05/2016 (2yr)

Lead Fullstack Software Developer in .NET, java, AngularJs

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)
- Modernisation of a legacy website (from asp.NET/vb.net to angularjs/bootstrap-css/odata/C#)
- Optimization (moved from SQL to C#, calculated in a under a few minutes instead of half an hour)
- Industrialization of the build process + automated unit tests
- Pushed for a test-centric BDD approach with SpecFlow

  Technologies: C#, VB.NET, java, bootstrap css, angularJs, javascript/typescript, Visual Studio, vscode, eclipse, jenkins, automated GUI tests with selenium

---

Société Générale CIB, CTY – Commodities trading desk 08/2011 - 05/2014 (~3yr)

.NET Developer

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

Maintained tools for the *Front Office*:

- Pre-trade pricers: shows greeks, MtM, 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 across 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, IBM Symphony (grid computing), team foundation server

---

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 recommendations 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: .NET, java/j2ee, jboss, Oracle 9i, Adobe Flex 4, blazeds, hibernate

---

Amadeus IT Group, 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
- Maintained and wrote some basic server-side java beans

Product definition, technical referent

- 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