

## Andri Rakotomalala

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

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

### Summary

**Multitechnology developer specialized in Python, .NET(C# or F#) + typescript(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 software development
- 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

Distributed computing

Data Engineering

Software development and lifecycle

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, ReactJs, Angular, html/css

Languages : Python, C#, F#, javascript/typescript, java, SQL

Databases : Redshift, MongoDB, InfluxDb, 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, bridging the gap between data science and IT services.

**Technologies:** AWS and Azure, cloud architecture, 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

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### 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

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## 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

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## 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

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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 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

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

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## **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