Data Scientist, Quantitative Analyst and Mathematician.

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I am a Mathematician with specialization in Quantitative finance. Senior in Quantitative modeling with eight years of experience in economics, applied mathematics and computer science. My professional goal is to work on Quantitative Modeling and Data Science, bridging the transition gap between these two worlds. In search of intelligent solutions to complex problems in a variety of different areas. Skills: Python, R, Scala, spark, SQL

EXPERIENCE :

2019-2020 **Data Scientist & Machine learning engineer**
Groupe La Poste
AI-Department of Data Science & Lab Big Data

- **LaB-Attrition** was a data science project which aimed to enrich the current vision of the E-Commerce (Eboutique) department on customer behavior in the other branches of the Group activity. The main objective was to predict the rate of customer loss using different methods of Machine Learning in order to reduce it.

- **LaB-CHLOE** was a data driven decision making process that involved examining structured and unstructured data sets in order to provide real-time up to update information that can facilitate the company to maximize the decision value in the business. It improve the accuracy of inventory that is to prevent product shortage and just have enough inventory in the warehouse which will lead to a more organised warehouse. The project will speed up supply cycles to get the right stock in the right place at the right time to meet customer's demand.

- **SI-FINANCE** is a data engineer project which aims to implement a consolidated and homogeneous vision of a distributed converged architecture. This project addresses the challenges of the evolution of Big Data and application deployments. First, a converged platform provides comprehensive multi-tenant functionality that provides logical separation of data, work execution and end user access. Second, to allow execution on remote sites, a converged data platform supports distributed processing with a logically centralized architecture. Finally, this approach will help the business to quickly make data-driven decisions.

- **POST-IMMO** project is a data visualisation project which transform abstract data into visual models (dashboards) that improve supply chain operations through comprehensive information that's easier to analyze and act upon independent of location. The Dashboards also provide and display objective measures (metrics) and key performance indicators (KPIs) related to supply chain efficiency and allow managers to make important decisions.

Tools & Technologies: Python, Spark, Scala, Zeppelin, Kibana, Tableau, Dataiku, R .

2018-2020   **Data Scientist, Machine learning engineer**
Ebiznext by Umanise
Lab data science & Lab Data engineer

- In the **Lab Data science**, I contribute to prove the competence of Ebiznext on data analysis, data science and the data engineer. When a business needs to answer a question or solve a problem, they turn to the department of Data Science process. We explore all aspects of the business and develop programs using programming languages like Python, Scala and Spark to perform robust machine learning analytics.

- **Comet** is a Spark Ingestion Framework for Batch & Streaming, which is developed by Ebiznext as open source project. I developed the MetricJob part in the Comet project. The MetricJob module consists of computing performance metrics on the injection process, and statistics on the data.

- **Tafeng** project: was a POC (Proof Of Concept) which provide a descriptive and predictive analysis of transactional data (using Tafeng-dataset).

- The **F-Xgboost** project aims to analyze the detection of fraud which is often difficult to understand due to the disparity of data. However, Xgboost is a powerful machine learning tool for unbalanced datasets. We used the Kaggle dataset to test the model.

Tools & Technologies: PySpark, Scala, Spark, Jupyter, Gphi, No4j, Zeppelin.

2014 - 2018   **Research and Teaching Assistant**
Università Ca'Foscari Venezia: Economy & Finance
Université Paris 1 Panthéon-Sorbonne: mathematics & computer science

- Research and development of predictive models in order to anticipate the evolution of trend data for the LaBex REFI (Laboratory of Excellence in Financial Regulation): Stochastic Volatility Modeling, Option pricing, Financial Regulation, Systemic Risk, Machin learning, Network Theory, Decision in the Portfolio Theory.

Tools & Technologies: Python, R, Sage, SAS, MatLab.

2018   **Economics & Data analyst**
Institut de recherche pour le développement (IRD)
Social development & immigration

- The main goal of this project was to collect and to store data on immigration situation. We brought also technical expertise to ensure the quality and accuracy of that data, then process, design and present it in ways to help people, businesses, and organizations make better decisions.

Tools & Technologies: Python, Microsoft Excel, R.

2017   **Data Scientist & Data analyst**
Fact Madagascar

- The project **Diaspora malagasy** aims to analyze immigrant associations in Paris from the point of view of the network. To determine the importance of immigrant associations as an integration tool and the contribution of each association in the development of Madagascar.

Technologies mobilisées : Python, STATA, R.

2017	**Software Engineer** SOFTIA INGÉNIERIE Département DEV - **GEODE**: The purpose of the project was to migrate the data from Oracle database to MySQL database. Implementation of packages, functionality and validation tests for the migration of multimedia data. Technologies mobilisées : PHP.

FORMATION:

2014 - 2018	Double PHD in Mathematics and Computer Sciences & Quantitative Finance Université Paris 1 Panthéon-Sorbonne & University of Ca' Foscari Venezia Date : 30/11/2018 . Title: "**Integration of VIX information in GARCH option pricing models**." Directeur: **Monica BILLIO**, Université Ca' Foscari Venezia. Co-Directeur: **Christophe CHORRO**, Université Paris 1.
2011 - 2013	Double Master II: **Modélisation et Méthodes Mathématiques en Economie et Finance (MMMEF) et Quantitative Economics Master**, Université Paris 1, Panthéon Sorbonne, l'Université de Bielefeld, Allemagne and l'École Nationale Supérieure de Techniques Avancées **ENSTA** Title: "**Distortion risk measure.**"
2011 - 2012	Master I: Quantitative Economics Master (QEM I), University of Bielefeld.
2010 - 2011	Master I: Mathematical Methods in Economics and Finance, Université Paris 1.
2008 - 2009	D.E.A: **Diplôme d'études approfondies mathématiques pures en théorie des nombres** in the University of Antananarivo, Department of Mathematics . Title: "**Relation entre forme modulaire de Hilbert et courbe elliptiques sur un corps de nombres totalement réel**." Directeur: **Gérard RAZAFIMANANTSOA**, Université d'Antananarivo.
2007 - 2009	D.E.S.S: **Diplôme d'études supérieures spécialisées en finance** in the University of Antananarivo, Department of Economics and Finance, Internship : A.R.O (Assurance Réassurance Omnibrance), Department : Actuariat, Life insurance.

PUBLICATIONS :

23-07-2019	Option Valuation with IG-GARCH model and an U-Shaped pricing kernel. by Rahantamialisoa Fanirisoa & Christophe Chorro DOI: 10.1007/s00500-019-04236-4 Published in Journal of Soft Computing
23-12-2019	Discriminating between GARCH models for option pricing by their ability to compute accurate VIX measures. by Rahantamialisoa Fanirisoa & Christophe Chorro HAL : halshs-02323959 Submitted in Journal of Financial Econometrics

15-07-2019 A new two-step estimation strategy for non-Gaussian GARCH models.
by Rahantamialisoa Fanirisoa & Christophe Chorro
DOI: 10.13140/RG.2.2.10299.85282
Submitted in Journal of Empirical Finance

05-06-2018 Distorted elliptical bimodal distribution using an inverse S-shaped distortion function.
by Rahantamialisoa Fanirisoa
Documents de travail du Centre d'Économie de la Sorbonne 2016.74.

CERTIFICATIONS

20-06-2019 **Databricks Certified Developer - Apache Spark 2.x for Scala**
Databricks
Credential ID : 0000000053.

18-09-2018 **Certificat Data Science and Big Data**
Université Paris Dauphine- PSL

18-06-2018 **Data Visualization with ggplot2**
DataScientest.com
Credential ID : 500BE6-5FA84A-94E61B-37FDA6e

18-06-2018 **Data-visualization with Matplotlib**
DataScientest.com
Credential ID : BB9D54-41518E-885DDB-44E833

18-06-2018 **Machine learning with R**
DataScientest.com
Credential ID : 3A1745-2C5AE1-F6927C-EFC70B

18-06-2018 **Machine learning with Scikit-learn**
DataScientest.com
Credential ID : F1BBDD-C10A44-A86A89-98A995

18-06-2018 **Natural language processing**
DataScientest.com
Credential ID : 4EC3AA-326AD3-241FAF-752A14

18-06-2018 **HTML5 et CSS3**
OpenClassrooms
Credential ID : 8323417747

2016-2017 **Data Scientist**
ORT France, Programme Paris Code de la Mairie de Paris.

HONORS & AWARDS

2017 - 2018 **Teaching Fellowships (ATER)**
Université Paris 1, Panthéon Sorbonne.

2014 - 2017 Erasmus Mundus EDEEM Fellowship
European Union (EACEA)
The EDEEM Fellowship program is research-oriented and aims to produce top-quality researchers, who will gain international experience working within leading European research units that have some of Europés best researchers in economics.

2014 - 2017 Erasmus Mundus QEM Scholarship
European Union (EACEA)
QEM - Interdisciplinary Master in Economics enabling students to acquire a thorough knowledge of techniques, advanced methodologies and theory of modeling in economics, with the goals of both research orientation and practical applications in the private as well as in the public sector.

Nov-2016 Second-prize Winners
Startup Weekend By JPM
48 hours to co-create with a team of 5 wonderful people the future of renewable energy MAGIE: "Magnetic energy" with zero carbon solutions of tomorrow. This project aims to reduce greenhouse gases emissions..

Nov-2015 First-prize Winners
Startup Weekend Madagascar in Paris
Startup Weekend is an intense 54 hour event which focuses on building a project which could form the basis of a credible business over the course of a weekend. The weekend brings together people with different skillsets. We build a startup project MadaReVe: "Madagascar Révolution Verte" which aims to improve agriculture and trigger the green revolution in Madagascar.

SKILLS & ENDORSEMENTS:

OS	Windows XP, Linux.
DB	MySQL, PostgreSQL, Oracle, ElasticSearch
Tools	Spark, HDFS, MapReduce, SAS, Latex, Microsoft office.
Langages	C/C++, MATLAB, Maple, STATA, SAS, SAGE, Latex, R, Mathematica, PHP, HTML, CSS, python, SCALA.
Viz	Python (seaborn, matplotlib), R (ggplo2), Kibana, Tableau, Dataiku, Zeppelin

LANGUAGES :

Malagasy	Native
French	Full professional proficiency.
English	Professional working proficiency.

PERSONAL SKILLS:

Creativity, innovation, open-mindedness, Flexibility, adaptability, helpfulness, curiosity, perseverance, autonomy, decision-making capacity, teamwork and Sense of communication.

Hobby	Cine, football, vin, chess, Sport