

Louis DOUGE

ENSTA PARISTECH · NATIONAL UNIVERSITY OF SINGAPORE · AXA

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"Be the change that you want to see in the world."

Experience

AXA Research, Engineering & Vision (REV)

Singapore

DATA SCIENTIST

Mar. 2019 - Present

- in progress

Architas Solutions - Member of AXA Group

Singapore

HEDGING ANALYST - APAC TEAM

Mar. 2018 - Present

- Performed dynamic hedging activities for Variable Annuities (VA) products
- Demonstrated operational excellence in Asset and Liability Management (ALM), derivatives valuation and VA pricing
- Collaborated daily with Australian (AMP) and Hong Kongese clients (AXA Life Europe)
- Developed and enhanced technical tools in C++ (Asset pricer), C# and VBA (Trading Tool generation) as well as SQL (Inforce Analysis Tool) with both Europe and Asia teams.

Covalent Capital - Fintech Startup

Singapore

PART-TIME INTERN - WWW.COVACAP.COM

Jul. 2017 - Dec. 2017

- Created an analytical dashboard using VBA
- Developed an Online Roadshow Planner for automatic meeting planning (Python: Flask+MySQL)
- Worked on optimal assignment problems, applied to bond issuance
- Developed animations for the website's welcome page (Javascript - JQuery)

New York University - Computer Science Department

NY, USA

RESEARCH INTERN - SUPERVISOR: BHUBANESWAR MISHRA

May. 2016 - Jul. 2016

- Explored Stochastic Processes involved in Linguistics based on Partha Niyogi's work
- Built Language evolution model using word2vec vectorization algorithm, Kohonen Maps (Self-Organizing Maps), and the concept of Bayesian Echo Chamber

Ignyta Inc. - Precision oncology company

San Diego, USA

SUMMER INTERN - WWW.IGNYTA.COM

Jul. 2015 - Aug. 2015

- Coded promotional movies dedicated to investors (PyMOL Python Library for molecular visualization).
- Assisted a scientist for data collection from a synchrotron, and protein purification

Forum Trium - Job Fair (Student-organized event)

Paris, France

VICE-PRESIDENT - WWW.FORUM-TRIUM.COM

Jan. 2015 - Jan. 2016

- Budget: €200K - 150 companies in Parc des Expositions, Paris - 3500 visitors
- Team management for cold calling (8 people), responsible for fire safety and security, promotion of the event
- Assessment and Budget allocation to student projects

Education

National University of Singapore - French Double Degree Program (FDDP)

Singapore

MASTER OF ENGINEERING - INDUSTRIAL & SYSTEMS ENGINEERING

Aug. 2016 - Jul. 2018

- Master thesis: Real-time Vehicle Routing Problem with Stochastic Demand inspired by real logistics companies.
- Approximate Dynamic Programming
- Online data processing (from Singapore's Land Transport Authority API)
- Neural Networks course (MLP, RBF, SOM, Markov Decision Processes)

ENSTA ParisTech (Master's degree, year 1) - "Grande École"

Paris, France

"DIPLOME D'INGÉNIEUR" CURRICULUM

Sept. 2015 - May 2016

- Stochastic Calculus (applied to Quantitative Finance)
- Statistical Modeling (using R) and Chronological Series (ARMA, ARIMA etc.)
- Relational Databases Design course
- Projects: Option Pricing using generic Monte-Carlo methods (C++) - Chess player program (C++)

ENSTA ParisTech (Bachelor's degree) - "Grande École"

Paris, France

"DIPLOME D'INGÉNIEUR" CURRICULUM

Sept. 2014 - June 2015

- Applied Mathematics: Differentiable Optimization, Systems Control
- PDE Analysis and Discretization,
- Projects: Digits recognition using Kohonen Maps (Python)
- Minor in Economics (Macro & Micro)

Lycée Sainte-Geneviève (Bachelor's degree)

Versailles, France

"CLASSES PRÉPARATOIRES" - PREPARATORY CLASSES

Sept. 2012 - Jul. 2014

- Major in Mathematics, minor in Physics
- Project: Optical Fiber Simulation using Bessel Equations (using Maple language).

Technical Skills

Languages

- French: Native
- English: Full Professional Proficiency
- Spanish: Intermediate

Programming Skills

- Advanced: Python (2.7 and 3.4+), C++
- Python packages: Numpy, Matplotlib, Pandas, Scikit-learn, Tensorflow
- Others: VBA, SQL, Matlab, R, XHTML/CSS
- As a hobby: data visualization (especially geographical data) using Javascript, JQuery and the D3.js library

Computer Skills

- OS: Unix (Mac OSX, Linux) Windows. Shell scripting
- Git: github.com/doulouUS
- Latex, Microsoft Suite, Adobe Photoshop

Award

Scholarship - Fondation de Coopération Scientifique - Université Paris-Saclay

Paris, France

May 2016

Awarded after selection process, to help conduct my NYU's research project.

Personal Interests

HOBBIES INCLUDE

- Ski (Competition level), Golf (licensed)
- Geeky topics: investor in Crypto-currencies, medium.com avid reader
- Sailing (former crew member & Sponsor manager at ENSTA's sailing association) see enstaquet.ensta-paristech.fr
- Easter Rowing Club member in Singapore <http://easterrowing.club/>
- Mountain Trailing (BTS Ultra around Mt Bromo)
- Classical Piano: recitals (with up to 30 people), Trio piano-cello-violin (Haydn) concert