Rayan Takka

(+33)658 67 38 92 | rayan.takka@student-cs.fr | linkedin.com/in/rayantakka |

Looking for a 6-month internship starting in May 2023

EDUCATION

CentraleSupélec   Sep. 2019 – Apr. 2023
MSc in Engineering, Mathematics, Computer Science   *Paris Saclay, France*
- Relevant Coursework : Probability theory, Partial Differential Equations, Statistics, Algorithms and Complexity, Machine Learning, Models and Systems for Big Data Management, Mathematical modeling of financial markets, Quantum physics.

ETH Zürich   Feb. 2021 – Aug. 2021
Academic exchange at the Economics/Mathematics Department   *Zürich, Suisse*
- Main courses: Decisions and Markets, Financial Economics, Business Analytics, Computational Methods for Quantitative Finance

Lycée Masséna   Sep. 2017 – Jul. 2019
Intensive preparation for the entrance exam for French top Engineering Schools   *Nice, France*
- A French specific two-year undergraduate program leading to a nation-wide competitive examination into the "Grandes Ecoles" (France's top Graduate Schools in Engineering and Business studies).

Lycée International Alexandre Dumas   Sep. 2010 – Jul. 2017
French Scientific "Baccalauréat" (High School Diploma) with highest honors (18.18/20)   *Algiers, Algeria*

EXPERIENCE

Quantitative Investment Strategies Structuring Intern   Mar. 2021 – Aug. 2022
BNP Paribas Corporate and Institutional Banking   *Paris, France*
- 6 month internship in the QIS Lab OF BNP Paribas CIB, in charge of the development of quantitative investment strategies. Main Tasks : development of new intraday strategies and analysis tools, quantitative analysis of high frequency data to identify optimal solutions.

Fixed Income Trading Intern   Sep. 2021 – Feb. 2022
Société générale Corporate and Investment Banking   *Paris-La Défense, France*
- 6 month internship in the Euro Govies and Inflation trading desk, in charge of the quotation and hedging of European bonds. Development of Relative Value and risk monitoring tools.

PROJECTS

Credit Card Fraud Detection using Machine Learning   Apr. 2021 – Jul. 2021
One month Machine Learning project   *Zürich, Switzerland*
- Study of machine learning methods and performances comparison for the credit card fraud detection problem

Numerical approach to the Heston model for option pricing   Jan. 2021 – Apr. 2021
Three month project in Applied Mathematics   *Zürich, Switzerland*
- Introduction to the Heston model and comparison to other models (B-S, CEV-SV), numerical implementation of an associated pricing formula in Python via Numpy, Scipy, Matplotlib, Pandas.

Mathematical modelling of a viral spread   Jan. 2020
One month project in Applied Mathematics   *Paris Saclay, France*
- Use of dynamic models for epidemic propagation based on ordinary differential equations (SIR, SIS, etc.) for prediction and decision support. Numerical implementation in Python via Numpy, Scipy, Matplotlib, Pandas.

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

Summer Trainee/Volunteer   Jul. 2020 – Aug. 2020
Alpes-Maritimes Food Bank   *Nice, France*
- Sorted donations in the cold-room and delivered food packages.
- Created IT tutorials to help volunteers to use the inventory management software. VBA programming in order to automatise various tasks such as inventory reporting.

IT Manager   Oct. 2019 – Feb.2021
Hyris TV   *Paris Saclay, France*
- Hyris TV is the audiovisual association of CentraleSupélec and is responsible for the production of multimedia content for the other associations on campus as well as the realization of services for individuals. As a technical manager, I managed a team of 5 people and a 15k€ equipment park.

SKILLS AND HOBBIES

IT: Python, VBA, Microsoft Office, SQL, LaTeX, Git, Adobe Creative Suit
Langues: French/Native – English/Fluent – Spanish/Intermediate
Sport: Member of CentraleSupélec's Football club, Running, Hiking
Teaching: Mathematics and Physics tutor for undergraduate and high shool students