

Rayan Takka

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

Looking for a 6-month internship starting in May 2023

EDUCATION

CentraleSupélec <i>MSc in Engineering, Mathematics, Computer Science</i> <ul style="list-style-type: none">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.	Sep. 2019 – Apr. 2023 <i>Paris Saclay, France</i>
ETH Zürich <i>Academic exchange at the Economics/Mathematics Department</i> <ul style="list-style-type: none">Main courses: Decisions and Markets, Financial Economics, Business Analytics, Computational Methods for Quantitative Finance	Feb. 2021 – Aug. 2021 <i>Zürich, Suisse</i>
Lycée Masséna <i>Intensive preparation for the entrance exam for French top Engineering Schools</i> <ul style="list-style-type: none">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).	Sep. 2017 – Jul. 2019 <i>Nice, France</i>
Lycée International Alexandre Dumas <i>French Scientific “Baccalauréat” (High School Diploma) with highest honors (18.18/20)</i>	Sep. 2010 – Jul. 2017 <i>Algiers, Algeria</i>

EXPERIENCE

Quantitative Investment Strategies Structuring Intern <i>BNP Paribas Corporate and Institutional Banking</i> <ul style="list-style-type: none">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.	Mar. 2021 – Aug. 2022 <i>Paris, France</i>
Fixed Income Trading Intern <i>Société générale Corporate and Investment Banking</i> <ul style="list-style-type: none">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.	Sep. 2021 – Feb. 2022 <i>Paris-La Défense, France</i>

PROJECTS

Credit Card Fraud Detection using Machine Learning <i>One month Machine Learning project</i> <ul style="list-style-type: none">Study of machine learning methods and performances comparison for the credit card fraud detection problem	Apr. 2021 – Jul. 2021 <i>Zürich, Switzerland</i>
Numerical approach to the Heston model for option pricing <i>Three month project in Applied Mathematics</i> <ul style="list-style-type: none">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.	Jan. 2021 – Apr. 2021 <i>Zürich, Switzerland</i>
Mathematical modelling of a viral spread <i>One month project in Applied Mathematics</i> <ul style="list-style-type: none">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.	Jan. 2020 <i>Paris Saclay, France</i>

LEADERSHIP AND EXTRACURRICULAR ACTIVITIES

Summer Trainee/Volunteer <i>Alpes-Maritimes Food Bank</i> <ul style="list-style-type: none">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.	Jul. 2020 – Aug. 2020 <i>Nice, France</i>
IT Manager <i>Hyris TV</i> <ul style="list-style-type: none">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.	Oct. 2019 – Feb. 2021 <i>Paris Saclay, France</i>

SKILLS AND HOBBIES

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