Marwan MENAA

Financial Engineer

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Education

Université Paris Dauphine-PSL — PhD Candidate Paris, France
Thesis: Alternative Data as New Indicators for Economic Analysis - CIFRE Banque de France *Nov. 2024 - Present*

Université Paris Dauphine-PSL — Master 272 Paris, France
Master 272 Economic and Financial Engineering, Specialization: Quantitative Finance *Sept. 2021 - Nov. 2022*

Selected Coursework: Macroeconomics, Commodities, Econometrics, Quantitative Analysis, Fixed Income

École Supérieure d'Ingénieurs Léonard-de-Vinci — ESILV Paris - La Défense, France
Master of Financial Engineering & Quantitative Finance *Sept. 2019 - Nov. 2022*

Selected Coursework: Market Risk, Advanced Probability, Stochastic Calculus, Machine Learning

Lycée Saint-Stanislas — Classe Préparatoire aux Grandes Écoles Nantes, France
Preparation program to the Top French Engineering schools entrance exams *Sept. 2016 - Jul. 2019*

Selected Coursework: Wave physics, Electromagnetism, Fluid mechanics, Quantum mechanics

Professional Experience

Royal Bank of Canada Capital Markets - Off-Cycle Intern Paris, France
Risk Solutions Group - Rates, FX & Commodities Derivatives *Nov. 2023 - May 2024*

- Pricing of Rates derivatives (IRS, XCCY Swap, Caps/Floors), FX derivatives
- Worked on new issue swap projects (pricing modeling)
- Developed a Python tool to calculate FX XVA charges automatically
- Pricing of XVAs (EME, ENE, EPE and PFE scenarios)
- Product life tracking and monitoring

European Central Bank - Monetary Policy Trainee Frankfurt am Main, Germany
Directorate General Monetary Policy - Monetary Analysis Data Centre *May 2022 - May 2023*
Bank Lending Conditions Section

- Developed a market data infrastructure and the Institutional Brokers' Estimate System
- Designed a Python library to handle real-time data from the Refinitiv Eikon/DataStream API
- Developed and applied models for economic projection exercises
- Performed in-depth analysis on fixed and variable interest rate bank loans
- Drafted the Quarterly Monetary and Financial Assessment and the Monetary Policy Book in a crisis environment

Banque de France - Economist/Data Scientist Intern Paris, France
French Central Bank, Directorate General Statistics and International Studies *Apr. 2021 - Aug. 2021*
Economics and International Cooperation Department

- Executed research on inflation anticipation measures
- Built and managed a database of more than 15 million press articles related to inflation
- Created an alternative real time inflation indicator news-based with high-frequency data
- Monitored research on International Monetary Fund's Articles IV with more than 2200 articles
- Measured the gap between International Monetary Fund Staff and Authorities' points of view
- Produced a financial stability country risk indicator based on financial sentiment analysis

Programming Skills

- **Languages**: Python, Julia, R, C#, C++, SQL, VBA, .NET, MATLAB, XML, HTML/CSS, LaTeX
- **Technologies**: Microsoft Excel, MySQL, Text mining, Natural Language Processing (NLTK, SpaCy), Web scraping (BeautifulSoup, Selenium), Web development (Django), Machine Learning (Scikit-learn, PyTorch), Big Data, API

Additional Information

- **Languages**: **French**: Native **English**: Fluent **Spanish**: Conversational **Arabic**: Basic
- **Certificates**: Bloomberg Market Concepts (BMC) Autorité des Marchés Financiers (AMF)
- **Hobbies & Interests**: Travelling Running Hiking (GR20, TMB) Judo (Brown Belt) Technology