MARTIN LE FORMAL

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EDUCATION

EFREI Paris, France 2021-2024 (expected)
Master of Science in Computer Science and Data Engineering
Relevant Coursework: Statistics, Machine Learning, Big Data Frameworks, Cloud Computing

EFREI Paris, France 2018-2021
Bachelor of Science in Computer Science & Engineering
Relevant Coursework: Linear Algebra, Probability, Analysis, Algorithmics, Electronics, Databases

RELEVANT SKILLS

Statistical Learning	Linear Regression, Classification, SVM, PCA
Data Analysis w/ Python	NumPy, pandas, SciPy, scikit-learn, matplotlib, PyTables
Low-Latency C++	Compile-Time Dispatch, Cache Optimization, Lock-Free, SIMD
TUI Environment	Linux, I3, Tmux, Fish-Shell, Neovim

EXPERIENCE

Embedded Software Engineer - Missile Optics and Electronics Apr 2024 - Sep 2024 (current)
Thales LAS *Elancourt, France*

· Rafale-F4 command simulation to the Talios POD through a MIL-STD-1553b bus

Quant Developer - Automated Market Making - Equities & Derivatives Oct 2022 - Apr 2023
BNP Paribas CIB *Paris, France*

· Created a log parser through PySpark used for metrics extraction from large files (50GB)
· Developed an extension to the Python pickle library allowing serialization of runtime polymorphic instances
· Refactored the market simulation engine launcher used for backtesting automation
· Implemented continuous integration for python libraries development through 12 test cases
· Rewrote the recuperation & archiving process for production servers configuration files

Quant Developer - Automated Market Making - Equities & Derivatives Jan 2022 - Aug 2022
BNP Paribas CIB *Hong Kong SAR, China*

· Developed a memory efficient network packets parser to generate market data file (2m30 for 15GB pcap)
· Integrated the parser to the FPGA listener through a multimap buffer and spinlock implementation
· Tested the new order management system for the Thailand Stock Exchange through 60 test cases
· Automated the generation of production servers reports measuring market order success rate

PERSONAL PROJECTS

High Frequency Trading in a limited order book Python
Avellaneda-Stoikov research paper implementation

· Order Book replication in pandas using LOBSTER datasets
· Mid-price adjustment based on inventory strategy with finite horizon
· Spread adjustment on reservation price from volatility

Fast order book design using a custom Hash Table C++

· Compile-Time oriented design (Templates, Concepts, constexpr)
· Contiguous data structure for cache locality
· Outputs a limit aggregated order book

INTERESTS AND ACTIVITIES

Competitive Programming: Prologin (2019 & 2020), ReadyTraderGo (2023), LeetCode, Codewars
Chess: (2/472) University Chess Championship (2021), Hosted the University Championship (2019) as the President of the school chess club.
Sports Rugby ✣ Golf ✣ Swimming