

MARTIN LE FORMAL

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EDUCATION

EFREI Paris, France <i>Master of Engineering in Data Engineering</i> Relevant Coursework: Statistics, Machine Learning, Big Data Frameworks, Cloud Computing	2021-2024
EFREI Paris, France <i>Bachelor of Engineering in Computer Science</i> Relevant Coursework: Linear Algebra, Probability, Analysis, Algorithmics, Electronics, Databases	2018-2021

EXPERIENCE

Embedded Software Engineer - Missile Optics and Electronics <i>Thales LAS</i>	Apr 2024 - Oct 2024 <i>Elancourt, France</i>
<ul style="list-style-type: none">· Architected a real-time distributed system handling multiple clients and protocols.· Developed a multithreaded flight stick driver from the Linux evdev interface.· Designed an event driven IPC protocol using Boost.Interprocess and Boost.Asio.· Documented the Talios/Rafale communication system over a MIL-STD-1553 bus.	
Quant Developer - Automated Market Making - Equities & Derivatives <i>BNP Paribas CIB</i>	Oct 2022 - Apr 2023 <i>Paris, France</i>
<ul style="list-style-type: none">· Created a log file parser using PySpark and regex for metrics extraction.· Developed an extension to the Python pickle library allowing runtime polymorphism serialization.· Refactored the market simulation engine launcher used for backtesting automation.· Implemented continuous integration for Python library development through various test cases.· Rewrote the retrieval & archiving process for production servers configuration files.	
Quant Developer - Automated Market Making - Equities & Derivatives <i>BNP Paribas CIB</i>	Jan 2022 - Aug 2022 <i>Hong Kong SAR, China</i>
<ul style="list-style-type: none">· Developed a parser in C++11 that generates H5 market data files from network packet captures.· Integrated the parser to the Multicast Listener for intraday data generation.· Tested the order management system according to the Thailand Stock Exchange new regulation.· Automated the generation of reports measuring market order success rate.	

RELEVANT SKILLS

C++20

- Toolchain: CMake, Ninja, Conan, LLVM-based tools, Valgrind, strace, perf.
- Networking: Boost.Asio, Boost.Beast, Unix sockets, Winsock2.
- Memory management: Memory Pool, Custom Allocators, Data Packing.
- Concurrency: Thread Pool, Spinlock, Lock-Free, Boost.Interprocess, SIMD.

Python 3.11

- Library development: Matching built-in modules standards, decorators, metaprogramming.
- Scripting: Speedcoding, Pythonic functional programming.

Data Engineering

- Data Analysis: NumPy, pandas, matplotlib, Scipy, scikit-learn.
- Data Processing: Hadoop, Spark, Airflow, Kafka.
- Database Systems: MySQL, Elasticsearch, Cassandra, MongoDB, Neo4j.

INTERESTS AND ACTIVITIES

Competitive Programming: ReadyTraderGo (2023), Prologin (2019 & 2020), LeetCode, Codewars.

Chess: (2/472) University chess championship (2021), Hosted the French university championship (2019) as the president of the school chess club.

Hobbies: Golf ♠ Literature ♠ Cinema ♠ Technology related podcasts