

Marcos Mayorga

C++/Linux Senior Software Engineer

London, UK

+44 07986800521

mm@mm-studios.com

<https://www.linkedin.com/in/marcosmayorga>

Summary

Senior developer specializing in high-concurrency, high-performance systems. Proven record designing, building, and operating scalable, reliable, and secure services using disciplined architectures, rigorous testing, code review, and mature CI/CD practices. Strong at aligning engineering execution with product roadmaps, mentoring engineers, and driving cross-functional continuous improvement. Technically curious and pragmatic, with a focus on adopting emerging technologies where they deliver measurable value. Entrepreneurial, zero-to-one builder with a bias to action, comfortable with ambiguity, fast feedback cycles with product and risk, and the ability to lead teams through roadmap execution end-to-end.

Technical skills

GNU/Linux	Free software advocate / debian GNU/Linux.
C++	Modern C++, Low latency, P2P Networks, CLI programs, debugging, Compilers, Deepest experience
Java	Android SDK, GUI Toolkit, Deep experience
Bash	Fast prototyping and analysis, devops. CD/CI. Infrastructure as code. Deep Experience
cloud	VM management. AWS-EC2/S3, GCP.
Practice	Clean code, tests, Continuous Delivery/CI, code review, build toolchains, TDD
Team	Experience Leading teams, Dev automation
Mindset	Entrepreneurial. Persistent, passionate. MVP Bootstrapping. Stakeholder alignment, ownership
Langs	Rust, Go, Python. Can read and patch.

Education

M.Sc. Physics. Solid State Physics. Universidad Autonoma de Madrid (Spain)

Current Interests

Finance	Core infrastructure, real-time low latency systems, Front-desk trading, matching engines
AI/ML	python, inference, local deployments, vector databases, RAG/CAG, LLM/SLM
Distributed Systems	P2P networks, privacy algorithms, governance systems, agentic systems, ecosystems and marketplaces

Experience

2019–2025 **Founding engineer/CTO, KATLAS Technology, London**

Latests projects:

Plebble/KATLASNET: Led architecture and development of a blockchain system L1+L2 with role based agentic protocols. 150K LOC. C++ Java TCP/IP.

Web3 Router: Designed a router computer integrating Router+Katlasnet Wallet. Digital Catapult UK. TCP/IP OpenWrt.

Morello: Tested new CPU architecture under Digital-Secure-By-Design (DSbD) programme building and running a Plebble Node testing compartmentalisation caps. FreeBSD/CHERI.

Patient Journey: Built a web3 demo Ecosystem in the Health space showcasing agentic workflows with privacy wallets. C++

Supply chain demo. Build an agentic ecosystem demo proving workflows for Ports, Containers and Ships. C++

Script Network: Lead developer/Fractional CTO. Led transformation of a legacy blockchain MVP (Web3 TV) into production-grade with daily deployments; C++/Go/React/Bash; Built from scratch a custom CD/CI for P2P networks. Focus on team performance. Worked alongside with COO and CMO.

NEM: Built wallet console CLI. As Core Protocol Engineer helped the core team in the launch of Symbol Blockchain. Exchange and Node aggregators integration. C++

- 2018–2019 **Head of Engineering**, *Atlas City Finance*, London
Led a team of 8 engineers (Senior and Junior) in the making of a B2B oriented blockchain. Hands-on. Crypto advocate/philosopher. C++
- 2017–2018 **Senior Research Engineer**, *nChain*, London
Authored Bitcoin core mutations with new opcodes supporting Research papers. (DRAND, Pairing Cryptography) Cryptography R&D: ZK-proofs, SNARKS. Circuits.
Authored Bitcoin-cash protocol upgrade. C++
Coached developers on the bitcoin codebase.
HLL: Developed a High level language and an op-code compiler and debugger for Bitcoin script. C++
- 2016–2017 **Senior Developer**, *ARM (Allinea)*, Warwick
Worked with High Performance super computers. HPC tools. GPU kernel programming. CUDA
Debugging highly concurrent systems. gdb C++. Qt. Startup acquired by ARM.
- 2011–2015 **Founder engineer**, *Independent*, Madrid
Projects I've developed:
Qtrac: Qt signal/slot debugger for Qt applications. C++, Licensing. Digital Signatures.
Trocavaluta: Fiat currency exchange. Matching engine C++. HTML+CSS+Javascript.
MADTradingRoom: Front-desk Trading platform operating the MINI-S&P500 market. C++, FIX. Worked alongside quant traders.
Betfair: Trading bot operating in sportsmarkets. Reverse-engineered Betfair protocol and built an alike Matching engine for testing.
IndexUp: Arbitrage finder. Distributed network of Caco nodes (scrappers) for data acquisition. Betting. C++
FairLuck: Designed, developed and marketed a real time fairness verification system in the gambling industry. C++
- 1998–2011 **Senior developer**, *Aerospace/Defence Industry*, Madrid/UK
Senior Engineer at leading firms: Boeing Research&Technology Europe, TECNOBIT, Silver Software.
Major projects:
ExoMars+SolarObter (Airbus Defence&Space): I dev'd a new testing fwork. AOCs. CAN, 1553B. Java, C++
HIFISIM (Boeing): Advanced Trajectory Technologies. Architect+Lead Developer. Airspace Discrete Event Simulation. C++ CMake
A661D: Cockpit designer for A400M displays. Arinc661. Java/Netbeans
MRTT (Airbus): Airborne refueling system. CMMI-5/ARINC-653. Airborne Real-Time Safety Critical Systems. C++/Ada. VxWorks. DO-168B
NAT5 (Tecnobit): Avionics software for Search & Rescue missions. Cartography. C++
GIMO: Chaff missile countermeasure system for Spanish Navy. C++

Publications (selected)

- 2017 *Computing Non-Primitive Recursive Functions Using a Total Turing Language*. <https://bit.ly/2PyyZDj>
- 2023 *Plebbles: Blockchain, Local Economies, Marketplaces and studies on self-managed societies* http://plebble.net/plebble_white_paper.pdf
- 2018 <https://github.com/root1m3/plebble>; Open Source contribution. Major author in Bitcoin protocol upgrade.
- 2017-2022 *GitHub*: <https://github.com/root1m3/plebble>; C++/Java/bash showcase. 150K LOC Codebase

Additional

- Languages English (Fluent), Spanish (Native).
Nationality Spanish (Spain)
Base Based in London since 2015

Detailed CV

- 7 pages https://mm-studios.github.io/about/cv_mm.pdf