

Christophe Duhamel

QUANTITATIVE ENGINEER & TECHNOLOGY STRATEGIST -- CFA CHARTERHOLDER (PRIVATE MARKETS)

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PROFESSIONAL SUMMARY

Quant Engineering Team Lead at Cargill in Geneva, leading a five-person team embedded in the Quant / Systematic Trading desk (commodities including agriculture; futures and options). I set the engineering roadmap behind the desk's research and trading priorities and build the shared data and research foundations that take systematic strategies from idea to production. Previously delivered investment, risk, and trading platforms at Pictet, Vitol, OCSIN, BNP Paribas, and Edmond de Rothschild. CFA Charterholder (April 2026, Private Markets pathway) with 15+ years across commodities trading, private banking, asset management, and investment infrastructure.

CORE COMPETENCIES

Python Data Pipelines & Airflow

Research Infrastructure & Backtest Performance

Derivatives Valuation (Monte-Carlo, Greeks)

Forward Curves, VaR & PnL Attribution

AWS & Infrastructure-as-Code

SQL & Relational Databases

Commodities: Agriculture & Energy

Portfolio Construction & Private Markets

WORK EXPERIENCE

Cargill

August 2026 -- Present

Quant Engineering Team Lead

Quant / Systematic Trading desk: liquid commodity markets including agriculture; futures and options
Geneva, Switzerland

- Lead a five-person Quant Engineering team embedded in the Quant / Systematic Trading desk, combining hands-on engineering with technical direction and delivery leadership
- Turn the desk's research and trading priorities into a coherent engineering roadmap
- Building a new Apache Airflow platform on Oracle Cloud Infrastructure (OCI), ahead of a planned migration to Amazon MWAA on AWS, to refactor and migrate 200+ ingestion pipelines into a canonical framework
- Build the shared foundations that help researchers and traders develop, evaluate, and implement systematic strategies
- Shipped an MCP server adopted by the Quant Engineering team and the Quant desk: 3 tools (database access, repositories access, historical cases knowledge base) exposing ingestion pipelines, data assets, and incident cases for support and trader self-service -- compatible with both self-hosted and managed models
- Guide technical and architectural decisions; strengthen data pipelines, analytical tools, and engineering capabilities through code review, mentoring, and knowledge sharing
- Push engineering standards and shared capabilities across the company's derivatives trading activities

Cargill

October 2025 -- August 2026

Senior Quant Engineer

Quant / Systematic Trading desk: liquid commodity markets including agriculture; futures and options
Geneva, Switzerland

- Built the data and engineering foundations supporting quantitative research and systematic trading, working directly within the desk
- Migrated a 3+Tb PostgreSQL AWS RDS (single-instance) database onto AWS Aurora clusters (1-writer, 3-readers)
- Quantified migration impact: nearly 90% of models now run at least 2x faster; nearly half at least 4x faster; the top 10% at least 10x faster
- Connected research needs with dependable engineering: research-ready datasets, analytical tools, and reusable desk capabilities

- Used agentic-driven development workflows to accelerate software migrations, code transformations, and validation at scale
- Licensed Bloomberg Terminal user: price checks and instrument search

● OCSIN (Employee of JEMS)

October 2024 -- September 2025

Senior Integration / Platform Engineer

Information Systems Department -- Integration Unit
Geneva, Switzerland

- Accountable for end-to-end integration process of applications, from architecture design through production delivery
- Optimised deployment pipelines via code deduplication (80-85% redundant code removed), improving maintainability and reducing operational risk
- Reintegrated 2 applications from scratch, increasing as-code configuration scope coverage
- Domains: IAM, HR, education; tooling: Control-M, Ansible, GoCD

● Pictet & Cie (Employee of JEMS)

March 2022 -- August 2024

Staff Engineer / Solutions Integrator

Software Integration Services -- Infrastructure & Production -- Tech & Ops Division
Geneva, Switzerland

- Integration lead for e-signature and electronic identification (e-IDV) solutions for PWM e-banking modernisation -- owned the full lifecycle from RFP, vendor evaluation, and contract negotiation through architecture design and production delivery
- Managed integration of investment management solutions (PAM teams), datahub/ETL platforms (buy-side analysts), and AML/screening and fraud analysis solutions (compliance officers)
- Lead member of a staff engineers group for toolset modernisation strategy, self-service architecture, and technical debt reduction; strategic/technical advisory to management
- Created FTP transfers self-service (2,000+ jobs) and job scheduling self-service (60,000+ jobs); reintegrated 5 applications; wrote shared toolset libraries
- Supervised interns and served as internal trainer on integration techniques and DevOps methodologies

● Vitol

June 2020 -- February 2022

Systems / Software Integration Engineer

Analytics Team -- DevOps Engineering (Try & Hire via Mantu/Amaris, then staff)
Geneva, Switzerland

- Built and single-handedly operated the Confluent Kafka platform for real-time price feeds (ICE Brent, NYMEX WTI) and oil futures forward curves storage
- Managed build, test, and deployment pipelines for the core risk engine (Bootstrap/Monte-Carlo simulations, Greeks for futures valuation), forward/forecast price curves engine, refinery models, and blending optimisation software
- Delivered Qlik BI applications for risk and PnL calculations (tightly coupled to the CTRM), executive dashboarding, ships tracking, and voyages booking software
- Managed CI/CD infrastructure for 50+ developers worldwide; rebuilt the enterprise messaging bus across multiple sites

● BNP Paribas (via Hays)

January 2019 -- May 2020

Integration Engineer

Application Integration -- Swiss Wholesale Production
Geneva, Switzerland

- Lead DevSecOps engineer and digital transformation advisor for Swiss Wholesale Production
- Designed production-grade Kubernetes clusters; established reference infrastructure coding practices
- Led CI/CD pipeline design for Infrastructure as Code; enforced NIST-based security access model (CyberArk + Centrify)

● Duhamel Consulting

October 2015 -- December 2018

Freelance Consultant

Software Development, Data Analysis, IT Project Management
Geneva, Switzerland

- Data analyst engagement for a Big Four consulting firm

- Developed web-based management solutions for financial services clients (C#/.NET, PHP/Laravel, Vue.js, Docker, AWS)
- Coordinated ERP migration projects for Swiss goods trading and manufacturing companies

● **Edmond de Rothschild**

October 2011 -- September 2015

Software Engineer

C#/.NET Development Team
Geneva, Switzerland

- Senior frontend/backend engineer providing group-wide C#/.NET solutions
- Development and maintenance of the Diversified Investment Management Tool
- Design and development of legal and regulatory reporting tools; cybersecurity coordinator for the development teams

EDUCATION

Tuition Certificate EURECOM	2010-2011
Network/Software Security	
Master of Engineering IMT Atlantique	2007-2009
Telecommunications, major in Computer Science	
Classes preparatoires Lycee Marcelin Berthelot	2005-2007
PCSI-PSI	

CERTIFICATIONS

CFA Charterholder (Private Markets pathway)	CFA Institute	2026
CFA Practical Skills Module: Portfolio Development and Construction	CFA Institute	2026
CFA Practical Skills Module: Python, Data Science & AI	CFA Institute	2025
CFA Practical Skills Module: Financial Modelling	CFA Institute	2024
GXPN -- GIAC Exploit Researcher and Advanced Penetration Tester (Licence #460)	SANS Institute	2014-2018

SKILLS

Quantitative & Financial: Portfolio construction, financial modelling, derivatives valuation (Monte-Carlo, Greeks), forward curves, risk analytics (VaR, PnL attribution), private markets frameworks, commodities workflows

Programming & Data Science: Python (NumPy, pandas, scikit-learn), C#/.NET, C++, SQL (performance optimisation), TypeScript/JavaScript, Machine Learning, Generative AI

Platforms & Data Infrastructure: Apache Airflow, Confluent Kafka, Databricks, AWS (Aurora, Bedrock, SageMaker), OCI, Kubernetes, Docker, Terraform, Elastic/Logstash/Kibana, Qlik, Bloomberg Terminal

Systems Integration & Delivery: CI/CD (Jenkins, GitLab CI, GoCD, Bamboo), Ansible, Puppet, Control-M, infrastructure-as-code, distributed systems, SaaS integration, API design

Security & Compliance: IAM (Entra ID, Ping Identity -- SAMLv2/OIDC/SCIM), HashiCorp Vault, CyberArk, Fortinet, NIST frameworks

Languages: French (native), English (native), German (basic)