# Guillaume Humbert | Software Engineer

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# **PROFILE**

Experienced software engineer with 16 years in C++, Python, Go and Java across financial services.

Proven track record delivering largescale distributed systems and leading engineering teams.

Passionate about building highperformance, scalable software.

## **ACHIEVEMENTS**

#### US patent (US11641274B2)

Invented a way to secure confidential data in non-trusted environments (e.g. public cloud) while retaining characteristics of the data that can be used for analytics.

#### **EXPERTISE**

- C++, Python, Go, Java
- Full Stack Software Engineering
- Performance Tuning
- Software Architecture
- Experienced in Working with Trading Desks
- Web Design (this resume is made with HTML & CSS)

# SIDE PROJECTS

- Arbitrage trading bot on Solana DEXes.
- Copy-trading bot on Solana DEXes using Rust; tracks top traders and mimics their trades in real-time.

# **EDUCATION**

# Master's Degree, Computer Science

University of Paris X, Nanterre, France, 2009-2011

#### **EXPERIENCE**

## **Executive Director, Software Engineer**

Goldman Sachs / Singapore / 2020 - Present

Technology stack: C++, Python, Go, Java.

# Project: Container Software Distribution at Scale

- Develop a new container software distribution system for the firm.
- Design an architecture that has to scale to 100M+ containers/day and 200K+ containers/minute bursts.

#### Project: SecDB, a cross business risk & PnL platform

- Develop new features for SecDB in-house database, called TDMS, which is a highperformance object database built in C++.
- Enhance the core of the database to perform authorization, which is currently done by client applications.
- Design for scale (2B+ daily DB connections), microsecond-level latency, and backwards compatibility (200+ million of client lines of code using the DB).
- Build an external service to perform authorization, with ultra-low latency and minimal memory footprint.
- Develop the new generation of an in-house scheduler, which handles large volumes of workloads, with high availability and high performance characteristics.

#### Vice President, Software Engineer

JPMorgan Chase / Singapore / 2014 - 2020

## Project: Athena, a cross business risk & PnL platform

- Business: Rates / Fixed Income and Derivatives (Bonds & Swaps).
- Developed risk & PnL applications (Python, C++) specific to Asian trading desks, and provide trader support.
- Coordinated between various teams (product control, middle office).
- Recognized as subject matter expert in Asia; part of the technical leadership team.
- Officially given the title of "Expert Engineer", which distinguishes the top 1.5% technologists in the firm.

## **Software Engineer**

Triquesta Commodity Finance / Singapore / 2012 - 2014

## Project: commodities risk management system, sold to global banks

- Developed a commodities risk management system in Java.
- Responsible for the full development lifecycle, including testing, release and production support.
- Participated as the technical head during pre-sales meetings.

# **Production Engineer**

Crédit Agricole CIB / Singapore / 2011 - 2012

# Role: Level 2 production support

- Provided level 2 production support across all CIB business lines.
- Automated most of manual production procedures and deployment, mostly in Bash, Perl, Python.

# **Software Engineer**

Société Nouvelle Electric Flux / France / 2009 - 2011

## Project: Customer relationship management & inventory management

• Involved in development (Java), testing, and production release.