

## SKILLS

### Current

### Recent

*Dim & distant*

*ActiveMQ*

*Agile*

**Amazon S3**

*Ant*

*ATDD/BDD*

*BASH*

*Camel*

*CVS*

*ClearCase*

*ClearQuest*

*Coherence*

**Cucumber**

*CSS*

*CXF*

**Docker**

**Eclipse/MAT**

*EJB*

**FIX Protocol**

*Flex*

**GIT**

*Grafana*

*Guice*

*Hadoop*

*Hazelcast*

*Hibernate*

*HTML*

*IBM MQ*

*Ice*

*InfluxDB*

**IntelliJ**

*Introscope*

*JavaScript*

*JAXB/RS/WS*

*JBoss*

*Jetty*

*jQuery*

*JProfiler*

**JSON**

*JSP/JSTL*

**JUnit**

*Kafka*

**KDB**

**Linux**

**Maven**

*MATLAB*

**Minio**

*MySQL*

**Oracle**

*OSGi*

*Pandas*

**Parquet**

**Presto**

**Puppet**

**Python**

*R*

**REST**

**RTC**

*Scala*

*Solace*

*Solaris*

*ServiceMix*

## JOHN DOWNING

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## SUMMARY

20 years core Java & related technologies. Multi-threading. Memory and performance profiling. Test automation. Tech Lead experience.

## EDUCATION(🎓) & EXPERIENCE

**8/2017 – current**

**UBS Investment Bank / City, London / Contract/Perm**

Currently I am part of the EFXDA team at UBS, developing a data and analytics platform. My recent focus has been on *Tick Tracy*, which links input and output node events together in structured log data and then chains these across components to derive pricing stack latencies. I also work on a home-grown task coordination engine, *Maestro*, and am using this to develop a hedging regression test pipeline. Prior to EFXDA, I worked on *Flightdeck* - a precision pricing library which combined spot and interest rate feeds together with client markups and controls, and worked with quant devs to migrate this to a new low latency framework.

🎓 **9/2016 – 7/2017**

**Goldsmiths College, University of London**

**Postgraduate Diploma in Data Science**

Prior to joining UBS, I took a career break to study Data Science at Goldsmiths. Projects included automatic song lyric generation using ideas from topic modelling and RNNLM, and analysis & visualisation of TFL Cycle Hire journey data.

**8/2015 – 7/2016**

**Royal Bank of Canada Capital Markets / City, London / Contract**

At RBC I worked with the FX Distribution team to maintain a price streaming and trade capture platform. I also helped streamline and automate the build and deployment processes and instrument the platform - uploading performance metrics to InfluxDB for display on Grafana dashboards.

**6/2014 – 6/2015**

**State Street Global Markets / Canary Wharf, London / Contract**

At State Street I was part of an agile team, building components for their FX Accelerated Growth programme - specifically the development of OSGi bundles to route messages and generate back-to-back trades for risk management flows.

**3/2011 – 2/2014**

**HSBC Global Banking & Markets / Canary Wharf, London / Contract**

At HSBC I was tech lead on the FlexRate project, building a greenfield Transactional FX (micropayments) platform. Achievements included the design of the externally facing REST API (which needed to work for clients who were not typical FX market participants), the design of a test automation framework (mis)using the Java Instrumentation API, and more playing about with classloading than should ever be necessary.

SOAP  
Spark  
Spring/MVC  
Subversion  
SVG  
Swing  
Sybase  
Tibco  
Tomcat  
UML  
Unix  
Velocity  
Weblogic/sphere  
XML/XSD/XSLT

**6/2009 – 3/2011**

***RBS Global Banking & Markets / Bankside, London / Contract***

This was my third time at RBS, again working on the FX RFQ trading platform – primarily the integration of new channels over FIX and Ice. The resulting increase in load (on what was by then a legacy application) provided many opportunities for investigating threading, timing and memory issues. One upshot being that, with help from Wily Introscope and Eclipse Memory Analyzer, I was able to track down a long-suspected memory leak in the pricing team's client-side library.

**🏠 9/2008 – 9/2009**

***Goldsmiths College, University of London***

***MSc Music Mind & Brain (Distinction)***

At this point I took a career break to study the “cognitive neuroscience of music” (so revisiting some of the ideas from my undergraduate degree, only this time with tunes). Dissertation: Investigating the relationship between kinematics and preferred beat period in the perception of rhythm.

**4/2008 – 9/2008 RBS Global Banking & Markets / London / Contract**

Back at RBS and working on the core FX RFQ trading platform – this time integrating a new rate provider into the pricing logic and migrating a legacy application onto the platform. As part of the latter I was able to resolve a major bottleneck in the client-side API by using a more fine-grained synchronization model.

**4/2007 – 4/2008 UBS Investment Bank / London / Contract**

My second stint at UBS, working on an app which managed trade lifecycles for IRD swaps. Part of a distributed front-to-back architecture, the application used XML over Tibco EMS to communicate with trade capture, analytics and risk/pricing components, and JAXB to convert from XML Schema types to Java DTOs for internal usage.

**5/2006 – 4/2007 RBS Global Banking & Markets / London / Contract**

My initial contract at RBS, working on their FX Bench platform. This was a typical server-side development role (core Java, multi-threading, Spring, Maven) with most issues revolving around performance, scalability and maintainability. Notably this required some creative approaches to Hibernate and caching, as the result of being constrained to use a legacy database schema.

**3/2003 – 4/2006 UBS Investment Bank / London / Perm**

Lead developer on the FX Web team, my achievements included a complete redesign of the FX Web (research & analytics) portal as well as the development of a home-grown interactive SVG analytics and charting solution.

**6/2001 – 3/2003 BuildOnline / London / Perm**

My role at BuildOnline was to develop collaborative services for the construction industry. This involved extensive use of core Java SE & Java EE technologies and included the development of custom low-level functionality for connection pooling and O/R mapping.

***7/1999 – 4/2001 Quidnunc / London, New York, San Francisco / Perm***

This was a junior dev role, although I was involved (to varying degrees) in the full development lifecycle - from requirements capture through to rollout & maintenance. Projects were typically Java EE architectures built around Weblogic or ATG Dynamo application servers and Oracle databases.

***🏴 6/1999***

***University of Sheffield***

**BSc Cognitive Science (1st Class)**

Dissertation: Modelling a community of neural network agents, and their development of a shared “language” to describe their surroundings.

## **PROFESSIONAL QUALIFICATIONS**

***8/2003***

***Sun Certified Enterprise Architect for the Java 2 Platform***

***2/2001***

***Sun Certified Programmer for the Java 2 Platform***

## **LANGUAGES**

Spanish (tengo que practicar mucho)

## **INTERESTS**

Music, songwriting, skiing, mind/brain/consciousness