JOHN DOWNING

john@downinja.com
github.com/downinja

SKILLS

Current
Recent
Dim & distant

ActiveMQ
Agile
Ant
ATDD/BDD
BASH (scripting)
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
MySQL
Oracle
OSGi
Puppet
Python
R
REST
RTC
Scala
Solace
Solaris
ServiceMix
SOAP
Spark
Spring/MVC
Subversion
SVG

SUMMARY

20 years core Java & related technologies. 15 years in banking (FX). Multi-threading. Memory and performance profiling. Test automation. Tech Lead experience.

EDUCATION() & EXPERIENCE

8/2017 – current
UBS Investment Bank | City, London | Perm

At UBS I work in FX Cash Execution IT, maintaining a pricing, distribution and trade capture platform based around *Flightdeck* - a precision pricing library which combines spot and interest rate feeds from the desk with margins and controls to result in tailored prices for specific client channels. Most recently I have been involved in the migration of this platform to components in a new low latency architecture - working alongside the quant developers who will own it going forward.

9/2016 – 7/2017
Goldsmiths College, University of London
Postgraduate Diploma in Data Science

A break from work to study for a Postgraduate Diploma in Data Science at Goldsmiths - with a tech stack including Python, R, MATLAB, Hadoop and Spark/Scala. 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 was part of the FX Distribution team, maintaining an FX Streaming platform as well as migrating components from a legacy system to a REST microservices architecture using Solace middleware. Alongside application development, I helped streamline the CI & deployment processes and also instrumented the platform - uploading performance metrics (method call durations, GC pause times, host stats) to InfluxDB for subsequent 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. This involved the development of OSGi bundles for their Global Transaction Hub (an ESB, based on Apache ServiceMix), to provide message routing functionality and back-to-back trade generation for FX risk management flows. As with HSBC, I was involved in the development of a test automation framework – this time using the Cucumber framework – which allowed the team to practice ATTD/BDD.

3/2011 – 2/2014
HSBC Global Banking & Markets | Canary Wharf, London | Contract

At HSBC I was technical lead on the FlexRate project – building a greenfield

Swing
Sybase
Tibco
Tomcat
UML
Unix
Velocity
Weblogic/sphere
XML/XSD/XSLT

Transactional FX trading platform. Notable achievements included the design of the externally facing REST API, the design of a test automation framework (mis)using the Java Instrumentation API, and more playing about with classloading than should ever be necessary. There was also more emphasis on DDD in this role, for example the identification of key domain concepts and terminology. This was both for external use, since FlexRate clients were often not typical FX market participants, and also within the team - the latter involving ongoing attempts to ensure that all stakeholders agreed upon (and stuck to) a shared way of describing the problem domain and functional requirements.

6/2009 – 3/2011
RBS Global Banking & Markets | Bankside, London | Contract

Back at RBS and once again working on the core FX RFQ trading platform. Primarily this involved the integration of various ECN channels over FIX/Radianz, as well as integrating internal channels over ZeroC's 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 API.

9/2008 – 9/2009
Goldsmiths College, University of London
MSc Music Mind & Brain (Distinction)

I took a year out to study the cognitive neuroscience of music. 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

This project involved RBS’ core FX RFQ trading platform, specifically the integration of a new rate provider into the pricing logic and the migration of a legacy application onto the platform. I also discovered a major bottleneck in the client-side API, which I was able to resolve using a more fine-grained synchronization model. Technology wise, the platform at this time was just core Java and Sybase, with client connectivity via XML over the web (with an optional Swing GUI on top). Code components were mostly proprietary, since the initial coding of the app predated open-source.

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

For my second stint at UBS, I worked on an application which modelled the trade lifecycles of IRD swaps and managed their dependencies on market events. 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 used 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 involved their benchmark rate trading 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 a legacy database schema.

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

This was a permanent role (my first in banking), where I was Technical Lead of the FX Web team. Achievements included a complete redesign of the FX Web research and 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 proprietary applications aimed at collaborative services for the construction industry. This involved extensive use of core Java SE and Java EE technologies, and included 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