

Adrian Ng, MSc.

Junior Metadata Engineer at IAG Cargo

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PROFILE

*NB. I am **not** job-hunting. May this document simply serve to give you an idea of what I'm about professionally.*

I am a *Junior Metadata Engineer* at IAG Cargo, an airline based at Heathrow. I have just started my job here but I will be building data pipelines and working with big-data technologies.

Content to keep this section rather sparse for now...

- Adrian

EDUCATION

Royal Holloway 2017
Data Science & Analytics

- Master of Science
- Pass with Distinction
- Department of Computer Science

King's Collge London 2010
Mechanical Engineering

- Bachelor of Engineering
- Upper Second Class with Honours
- School of Engineering

LANGUAGES

- Java 8
- T-SQL

SOFTWARE

- IntelliJ IDEA
- MS SQL Server
- VS Code
- Git
- Jira
- Maven
- WSL

IAG CARGO

Junior Metadata Engineer

Data Platform Team

June 2019 - Present

Oracle Ingestion Automation Created an automated data ingestion process written in *Powershell 5.1* capable of picking up files from LAN directory or *Sharepoint* (via REST API) for inserting into *Oracle* database. This automation was used in multiple projects and made use of *Powershell* modules: *Sharepoint PnP* as well as *Oracle* command-line applications: *SQL*Loader*, and *sqlcl*.

Sales Reference db Created a relational schema in *Oracle* making use of *MERGE* for *ETL* and *TRIGGERS* for archiving.

BA Internal Mentoring Programme Mentored a colleague based in Spain over a 9 month period.
moving-ahead.org

MANCHESTER CITY FOOTBALL CLUB

Data Analyst

Fan Relationship Management

Jan. - July 2018

NYCFC Data Integration Integrated New York City FC data into our analytical warehouse. Six-month project involving data discovery, analysis, engineering. Multiple data sources were involved: • NYCFC • Ticketmaster • Salesforce
Project Owner • Major League Soccer

Data Pipeline • built pipeline ingesting data from multiple databases, replacing *Informatica* solution
• achieved speed improvements using efficient DML & DDL (*OPENQUERY*, *MERGE*)

Data Cubes Storing analytical datasets in *Data Cubes* achieved
• up-stream computation of all drill-down/roll-up levels and *GROUP BY* permutations
• reduction in size of dataset, minimising bandwidth across distributed servers
• improved user-experience in *Tableau* front-end

Mentoring Dedicating time to mentoring junior colleagues remotely in Manchester/New York
• organised weekly workshops teaching basic DML and advanced DDL
• developed additional material on my website to supplement these workshops
• aimed towards self-sufficiency in writing database queries/stored procedures

GDPR Pipeline • integrated new GDPR schema into existing datastores (*SQL*, *Salesforce*)
Technical Lead • provide schema specification to *SQL* developers, advocating for indexable data types
• built efficient *MERGE* process featuring relational database design

- implemented a process to wipe personalised data belonging to any non-consenting individual stored in our data-warehouse

Customer Churn Model

Modelling MCFC/NYCFC customers' future propensity to churn via *logistic regression*.

- contributed to feature selection via: – data extraction – imputation – normalisation – R modelling
- researched alternate models (e.g. *Beta-Geometric/Beta-Bernoulli*), academic papers, R APIs

I developed a number of **SQL** processes to transform customer data into CRM segments. On occasion, I took responsibility for resourcing and managing the team's workload in *Jira*.

Virgin Media Segmentation Built a flexible segmentation process able to accommodate the numerous VM mailings and myriad ad-hoc configurations.

adrian.ng/SQL/recursion
adrian.ng/openquery-xml

- wrote a flexible import process to efficiently ingest millions of tuples distributed across multiple flat-files, gaining time-savings over the built-in import wizard
- achieved efficient joining of local and remote tables via use of **OPENQUERY**, **XML**, dynamic **SQL**
- implemented efficient regex parsing via recursion, producing a one-to-many tuple mapping

Volkswagen Onboarding Worked with .NET developers and project managers to on-board a new client.

- built and tested a new process for segmenting email *and* SMS from scratch
- provided schema specification to developers for data warehousing

TUI Redesign Collaborated with TUI to integrate a new, responsive design for *Thomson* and *First Choice* large deployment broadcasts (5M+ recipients)

- wrote **TCL** scripts for dynamic **HTML** merges and gained efficiencies by moving expensive operations upstream
- provided testing; gave feedback; managed expectations on technical feasibilities
- gained recognition with client and was awarded at the end of this three-month project