

ADRIAN NG

Junior Metadata Engineer at IAG Cargo

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DATA SCIENCE & ANALYTICS

MECHANICAL ENGINEERING

TRAINING

Royal Holloway
MSc.

2017
Distinction

King's College London
BEng.

2010
2:1

Functional Programming Principles in Scala
EPFL in progress

IAG CARGO

Junior Metadata Engineer

Data & Analytics

June 2019 - Present

Prototype Implementation
PL/SQL

- Implemented data processes originally prototyped by Data Exploitation team in *Alteryx/ Tableau*
- Reduced *Flight* prototype from day-long Alteryx workflow to 15 minute *SQL* process:
 - Computed *directed network graphs* with set-based iteration (**CROSS JOIN**, inline recursion)
 - Achieved a functional approach to returning sets by utilizing **record**, **table** types
 - Cached remote/computationally expensive datasets in *global temp tables*, *materialized views*
 - Established standards for Data Exploitation prototypes to follow (documentation, UAT evidence)

Self-Service Pipeline Creation
Python
Powershell
YAML

- Built an automated service enabling Data Exploitation team to set up their own data pipelines.
- Adopted **YAML** for user-friendly configuration resulting in utilization across multiple projects
 - Underlying code (Python, Powershell) made use of object-oriented patterns and practices
 - Used time-series analysis (differencing) to visualize unusually large/small imports (*Tableau*)
 - Clear documentation (installation, configuration) led to continued use throughout Lockdown
 - Incorporated **git** into development and deployment workflow

Sales Data Model
PL/SQL
Powershell

- Deployed a data model and ETL interface providing business stakeholders control over their data
- Made use of *snowflake* schema to model entity-relationships: account manager/customer/location
 - Relational design resulted in efficient **MERGE**, constant uptime, and immediate retrieval
 - Co-opted *Sharepoint* as user-friendly file system for ingress with *Powershell* APIs (PnP)
 - Generalized this project into aforementioned *Self-Service pipeline*

Training

Prepared training materials and hosted workshops (*SQL fundamentals*, *Markdown*)

Data Glossary

Established editorial guidelines for internal Wiki/Data Glossary. Interviewed others for content.

Mentorship

Mentored a colleague (*moving-ahead.org*). Listened to issues, asked questions. Provided guidance.

MANCHESTER CITY FOOTBALL CLUB

Data Analyst

Fan Relationship Management

Jan. - July 2018

New York City FC Integration
Project Owner

Greenfield project integrating data from NYCFC into analytical warehouse over six months.

- Liased with NYCFC stakeholders to evaluate business metadata
- Established pipelines integrating data from multiple sources: (NYCFC, Ticketmaster, Salesforce)
- Utilized *Data Cubes* at Tableau end-point to cache computation, shrink dataset, improve UX

GDPR PII Obfuscation
Technical Lead

Integrated new GDPR schema into existing datastores (*SQL Server*, *Salesforce*)

- Working with DBAs, advocated for indexable types and identity fields for customers
- Made use of these objects to implement process for obfuscating and auditing customer PII

CREATOR (NOW INSPIRED THINKING GROUP)

Senior CRM Campaign Executive

SQL Development

Dec. 2013 - Sept. 2016

ETL Process for CRM Broadcasts

Built a configurable ETL process to ingest (via **BULK INSERT**), transform into CRM segments, and load into broadcast service (*Lyris*).

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

- capable of multiple file ingestion, gained time-savings over the *SQL Server* import wizard
- achieved efficient joining of local and remote tables, using dynamic **SQL** to embed **XML** in **OPENQUERY**
- implemented efficient regex parsing with recursive CTEs, mapping delimited strings to rows