

Australia Post – Data Engineer Crash Plan (6 Days, 3–4 hrs/day)

Goal: Build practical fluency in GCP data stack (BigQuery, DBT/Dataform, Looker, Neo4j, Composer) and communication for scenario-style assessment.


Day 1 – SQL + BigQuery Foundations

- Google Cloud Skills Boost: *BigQuery for Data Analysts* (~1.5 hrs)
- Practice 5–10 SQLBolt exercises + 3 LeetCode DB problems.
- Learn: `WITH`, `ARRAY_AGG`, `STRUCT`, window functions, and table partitioning.

 **Goal:** Confident querying, aggregation, and optimization in BigQuery.


Day 2 – Data Transformation (DBT / Dataform)

- Watch: *Dataform with BigQuery* (YouTube, 20 mins)
- Clone a sample DBT repo → run `dbt run` + inspect DAG.
- Learn `ref()`, `sources`, `materializations`.

 **Goal:** Understand SQL-based data pipelines + versioned transformations.


Day 3 – Visualization (Looker + Tableau)

- Take Google's *Looker Fundamentals* (2 hrs)
- Practice LookML concepts: views, explores, joins, measures.
- Review Tableau dashboard examples for KPI and operational reporting.

 **Goal:** Explain how data flows from BigQuery → Looker/Tableau.

Day 4 – Graph & Relationships (Neo4j)


- [Neo4j Fundamentals](#)
- Practice `MATCH`, `MERGE`, and path traversal queries.
- Think: delivery route optimization, customer relationship graphs.

 **Goal:** Explain when graphs outperform relational models.

Day 5 – ETL + Orchestration (Cloud Composer / Airflow)


- Read: [Airflow Fundamentals](#)
- Create a simple Python DAG with `PythonOperator`.

- Review GCP data pipeline flow: Pub/Sub → Dataflow → BigQuery → Looker.

 **Goal:** Explain orchestration, retries, and monitoring for data jobs.

Day 6 – Scenario Practice + Interview Readiness

- Record 2-min responses to:
 - “How do you ensure data quality in pipelines?”
 - “How would you optimize a slow BigQuery job?”
 - “Describe a time you automated a data task.”
- Review GCP architecture diagrams + cost optimization notes.

 **Goal:** Speak confidently and practically about real-world data engineering decisions.

 **Outcome:** You’ll demonstrate strong SQL + data platform knowledge, pipeline orchestration insight, and practical cloud data fluency ready for Australia Post’s Vervoe-style assessment.