Data Analytics Project Portfolio

Students Name:

School:

Course:

Date:

**Cloud Data Migration & Analytics**

**Project Title: AWS Data Analytics Platform Migration (City of Vancouver)**

Objective: Design and implement a scalable data analytics platform in AWS.  
Dataset: Various structured and unstructured city data sources including:

Citizen Reports: Logs of service requests

Infrastructure Data: Maintenance records

Traffic & Public Safety: Sensor data

**Methodology:**

* Architecture Design:

Define an optimized data pipeline using AWS services.

* Data Ingestion & Storage:

Utilize AWS S3, Redshift, and Glue for data ETL.

* Security & Governance:

Implement IAM policies, encryption, and AWS Lake Formation for compliance.

* Analytics & Insights:

Process and visualize data for decision-making using AWS Athena and CloudWatch.

Monitoring:

Use AWS GuardDuty and AWS CloudTrail to track security events.

* Recommendations:

Improve operational efficiency through predictive insights.

**Tools & Technologies**

* AWS (S3, Redshift, Glue, Lambda, Athena, CloudTrail, GuardDuty)  
  Deliverables:
* AWS solution architecture and migration plan.
* Performance and cost analysis report.