

# SHUVO BARMAN

Toronto, ON, Canada

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## Summary of Qualification

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Data Engineer and Analytics professional with 6+ years of experience building ETL pipelines, automating data workflows, and delivering business intelligence solutions. Proficient in Python, Azure DevOps, SQL, and Power BI. Currently designing and scaling data infrastructure at Environment and Climate Change Canada.

## Technical Skills

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**Data Engineering:** Python, SQL, PostgreSQL, ETL/ELT Pipelines, Azure DevOps CI/CD, Apache Airflow, Parquet, Azure Blob Storage, DataOps, PySpark, Julia.

**Business Intelligence:** Power BI, DAX, Tableau, Data Visualization

**Data Processing:** Pandas, NumPy, Data Modeling, Data Wrangling, Requirements Analysis.

**ML & Analytics:** Scikit-learn, Feature Engineering, Predictive Modeling, Statistical Analysis, Customer Segmentation

**Tools:** Git, Linux, JIRA, Agile, Microsoft Azure, AWS (learning)

## Work Experience

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### Environment and Climate Change Canada

Jan. 2024 – Present

*Junior Economist*

*Gatineau, QC*

- Scaled an Azure DevOps CI/CD pipeline to process 15 scenarios end-to-end in under 40 minutes, replacing a manual Access-based workflow that took hours and could not be shared across the team.
- Engineered the pipeline to extract 58 target .dta files from 460+ files per scenario folder, producing 58 unique Parquet files, 63 master files, and 5 delta comparison files across GHG Emissions, Air Pollution, Electricity Generation, and Generation Capacity.
- Saved Economic Sector Leads 10 hours of manual reporting work per week by automating previously manual weekly scenario runs.
- Built a post-pipeline Python email alert system monitoring key economic variables and z-driver values against sector-specific thresholds, proactively notifying leads of cross-sector changes after every run.
- Cut province-specific stakeholder report distribution from 3–4 hours to under 2 minutes — covering 13 provinces, 10–30 tabs per workbook, with bilingual data validation and dynamic schema handling.

### Environment and Climate Change Canada

Sep. 2023 – Dec 2023

*Co-op Student*

*Gatineau, QC*

- Eliminated manual scientific data conversion by building a Julia package automating transformation of raw datasets into NeXus/HDF5 format

### UCB Fintech Company Limited

Aug. 2021 – Jul. 2022

*Data Analyst (Revenue Assurance & Business Intelligence)*

*Dhaka, Bangladesh*

- Engineered ETL pipelines using PostgreSQL and Python to process customer transaction data daily, enabling real-time analytics across customer care, marketing, sales, and tech operations
- Replaced a fully manual cashback disbursement process with an automated Python system handling 4,000+ daily transactions with 99.99% accuracy — reducing processing time from 24 hours to 30 minutes and cutting complaints by 25% weekly.
- Built customer segmentation models that improved campaign targeting accuracy by 30% and increased weekly transaction volume by 15%.
- Evaluated campaign plans against historical data and target benchmarks before go-live — ensuring every campaign launched was evidence-based.

### USAID MaMoni Maternal & Newborn Care Project — Java Programmer

Dec. 2018 – Aug. 2021

*Retained via Save the Children, Enroute International Limited, Dnet*

*Dhaka, Bangladesh*

- Digitised maternal and child health records for the Government of Bangladesh by converting paper-based registers into a structured mobile application.
- Trained 300+ government health workers across 10 districts on the deployed system.

## Education

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### Memorial University of Newfoundland

Sep. 2022 – Apr. 2024

*Master of Science in Computer Science*

*St. John's, NL*

### American International University-Bangladesh

May. 2014 – Apr. 2018

*Bachelor of Science in Computer Science & Software Engineering*

*Dhaka, Bangladesh*