# BUSINESS ANALYST INTERVIEW PROJECT SEPTEMBER 2025

## Project 1:

You are provided with five years of historical monthly exchange rate data for the Canadian dollar (CAD) versus the U.S. dollar (USD).

Please analyze the trends you observe over this period and identify any key factors that might have influenced major shifts. Using appropriate methods, project what the CAD/USD exchange rate might look like over the next year.

Finally, create clear and visually engaging graphs to present both your historical trend analysis and your future projection so that a non-technical stakeholder could easily understand your findings.

Please walk me through your approach, assumptions, and the reasoning behind your projection.

### **Project 2:**

You are provided with five years of historical data (calendar years **2020–2024**) for *urea* fertilizer prices in Western Canada. The dataset includes:

- Wholesale delivered price (DEL Western Canada, C\$ per metric tonne) —
  represents the delivered cost into the western Canadian market (wholesale / exdealer delivery level).
- Retail bulk price (regional retail / bulk price; Alberta bulk, C\$ per metric tonne)
   represents the end-market retail/bulk farm input price. (for the purpose of this exercise, we will use Alberta data as it is readily available)

#### Task (deliverables)

- 1. Using the five years of historical data, perform exploratory data analysis and produce clear graphs that show:
  - a. Annual wholesale DEL price (2020–2024).
  - b. Annual retail/bulk price (2020–2024).
  - c. Wholesale vs retail on the same chart with a clear legend and units.
- 2. Perform trend analysis to describe patterns, peaks, troughs, volatility, and likely causes (cite externally sourced drivers: e.g., global supply shocks, exchange rate moves, natural gas/nola price influences, export policy changes).

- 3. Using the five-year series, **produce a one-year forecast (for 2025)** for both wholesale DEL and retail market price. Explain your forecasting method (simple baseline model + how you would improve it in production).
- 4. Create a short written summary (≤1 page) that:
  - States the forecast numbers (wholesale and retail, C\$/mt) and confidence/assumptions.
  - Lists potential risk factors that could push prices materially higher or lower in 2025.

#### Dataset:

*Genesis Fertilizers* market reports for **Urea Western Canada DEL** annual averages (2021–2024).

A look back at Urea and MAP Western Canada monthly prices - Genesis Fertilizers

*IndexMundi /* commodity monthly series for Urea (converted to CAD) to estimate the 2020 wholesale baseline monthly/annual price.

<u>Urea - Monthly Price (Canadian Dollar per Metric Ton) - Commodity Prices - Price</u> Charts, Data, and News - IndexMundi

Provincial farm input reports (Alberta monthly farm input price tables / PDFs) and industry market reports (DTN, Green Markets) for **retail / Alberta bulk** figures and regional retail benchmarks. See Alberta farm-input files and DTN retail price commentary.

Alberta Farm Input Prices - March 2024