NEXT
CAREER DEVELOPMENT ACADEMY

Graduation Project Proposal Form

1. Project Information

- **Project Title:** Egypt Imports Analysis across all Sectors from 2005 to 2023
- **Course/Track:** Microsoft Data Engineer / DKH1_AIS4_G1e
- **Team Members:**
  1. اماني مصطفي محمود حلمي احمد زمزم
  2. ماهر محمود ماهر المغازى
  3. محمد رمضان محمود عيد
  4. محمد يحيى رجب محمد سلطان
  5. محمود السيد أحمد السيد درار
  6. محمود فوزى أحمد السباعي نصر

2. Project Overview

- **Objective:** Using the data that Central Bank of Egypt Provided for All Egypt Trades from 2005 to 2022
  We got the fellow Objectives :
  1- **Assess economic performance** -> gaining insights + understand the economy's performance over time
  2- **Forecast future trends ->** Use historical data to predict future trends in Egypt's imports
  3- Support informed decision-making -> Provide data-driven insights for **policymakers** and **business stakeholders**
  4- **Track subsequent changes** -> Develop a database designed to record and assess changes over time

- **Scope of Work:**
  - Data cleaning and preprocessing of the provided dataset
  - Designing Logical Schema
  - Creating physical database
  - EDA (Exploratory Data Analysis) Using SQL querying
  - Time series analysis and forecasting
  - Visualization of results and insights
  - Reporting and giving Recommendations Based on Analysis
- **Expected Outcomes:**
  - Comprehensive understanding of Egypt's import trends
  - Forecasting Future Import Trends
  - Interactive dashboards for data visualization
  - **Recommendations** for policy makers and businesses

3. Problem Statement

Egypt's economy relies heavily on imports for various sectors. Understanding historical import trends and accurately predicting future import values is crucial for economic planning, policy-making, and business strategy. This project aims to address the lack of comprehensive analysis and predictive capabilities in Egypt's import sector.

4. Proposed Solution

- **Technologies Used:**
  - Excel
  - SQL (for data querying)
  - Python (for time series analysis)
  - Power BI (for data visualization)
  - Asana (for project management and team collaboration)

- **System Architecture:**
  - Data Source Layer
  - Data Processing Layer (Cleaning and Preprocessing + SQL Database)
  - Analysis Layer (EDA + Time Series Analysis)
  - Visualization Layer (Power BI)
  - Project Management Layer (Asana)
  - User Interface (Presentation)

5. Resources Needed

- **Hardware/Software:**
  - Computers with sufficient processing power and memory
  - SQL database management system (SQL Server)
  - Python development environment (VS code)
  - Data visualization software (Power BI)
  - Asana project management software