# **SDG Problem Definition Document**

## **Project Overview: Gender Equality (SDG 5**

**Objective**

This project aims to develop a data-driven solution to address the gender wage gap, a specific problem within Sustainable Development Goal 5 (SDG 5), which focuses on achieving gender equality and empowering all women and girls. Through this project, we will:

* Design and implement a relational database.
* Write SQL queries for comprehensive data analysis.
* Use Microsoft Excel for data visualization, analysis, and interpretation.

**1. Problem Identification**

**Problem:**

A significant wage gap exists between men and women across various industries and job roles, reflecting disparities in compensation and opportunity based on gender. This wage gap has deep-rooted causes, including but not limited to discriminatory practices, unequal access to leadership positions, and lack of transparency in pay structures.

**Specific Focus:**

The primary focus of this project is to analyze wage disparities between men and women in different industries and job roles. The goal is to:

* Identify specific industries and roles where the gender wage gap is most pronounced.
* Explore the contributing factors behind this wage gap.
* Propose data-driven solutions to mitigate wage disparities and promote gender equality in the workplace.

**2. Methodology**

**Data Collection:**

The project will populate sample data on employee wages, job roles, gender, performance, education, and industry across various sectors. This data will analyze patterns and draw insights into the gender wage gap.

**Database Design**

A relational database will be designed to store and organize the collected data. The database will include tables for:

* Employees: Employee ID, Name, Gender, Age, Education Level, Industry, Job Role.
* Salaries: Salary ID, Employee ID, Base Salary, Bonus, Total Compensation, Year.
* Education Levels: Education ID, Education Level, Industry.
* Performance: Performance ID, Employee ID, PerformanceScore and ReviewDate.

**Data Analysis**

SQL queries will be written to analyze the data stored in the database. The analysis will focus on:

* Identifying the average salary differences between men and women in each industry and job role.
* Exploring the performance rating gender wage disparities.

**Data Visualization**

Microsoft Excel will be used to visualize the findings from the database. Key data visualizations will include:

* Bar charts comparing average salaries between men and women across industries.
* Line graphs showing the relationship between performance ratings on gender

**3. Expected Outcomes**

By the end of this project, we expect to clearly understand the gender wage gap in various industries and job roles. The analysis will:

* Identify industries where the wage gap is widest.
* Highlight potential causes of wage disparity, such as education level or job role segregation.
* Provide actionable insights and recommendations to close the wage gap, including policy changes, leadership opportunities for women, and transparency in compensation practices.

**4. Relevance to SDG 5**

This project directly addresses Sustainable Development Goal 5, particularly target 5.1, which calls for ending all discrimination against women and girls everywhere. By focusing on the wage gap, the project aims to:

* Support equal rights for women in the workplace.
* Promote fair and transparent compensation practices.
* Empower women economically, contributing to overall gender equality in the workplace.

**Pitch Deck presentation**

<https://gamma.app/docs/Tackling-Gender-Wage-Disparity-A-Data-Driven-Approach-to-Achieve--utzduzcki8lu0sc?mode=doc>