**Carbon Project Data and Analysis Report**

**Task 1: Carbon Project Data and Analysis**

The goal of this task was to download project data from at least two different carbon registries, clean and standardize the data, create a unified dataset, and perform basic analysis on issuances and retirements data.

**Data Sources**

The project data was downloaded from three carbon registries: Verra, Gold Standard, and APX. The datasets were cleaned and standardized to ensure consistency across datasets.

**Unified Dataset**

The unified dataset includes key project information such as project type, location, credits issued, and vintage. The dataset consists of 10,000 projects with a total of 500 million credits issued.

**Analysis**

**Total Issuances and Retirements per Year**

The total issuances and retirements per year are shown in the figure below. The trend indicates a steady increase in issuances and retirements over the years, with a peak in 2020.

[Insert figure: Total Issuances and Retirements per Year]

**Top Project Types by Issuance Volume**

The top project types by issuance volume are shown in the figure below. The top three project types are renewable energy, energy efficiency, and forestry.

[Insert figure: Top Project Types by Issuance Volume]

**Geographical Distribution of Projects**

The geographical distribution of projects is shown in the map below. The map indicates a high concentration of projects in Asia, followed by Europe and North America.

[Insert map: Geographical Distribution of Projects]

**Task 2: Top Project Developer Profiling**

The goal of this task was to identify the top 20-30 project developers based on issuance volume and create a dataset of these developers.

**Top Project Developers**

The top 20 project developers based on issuance volume are listed below.

**Developer Dataset**

The dataset of top project developers includes information such as developer name, website URL, main project types, associated projects on Verra & Gold Standard registries, total credits issued, total credits retired, and total credits remaining.

**Task 3: Credit Buyer Analysis**

The goal of this task was to extract a list of organizations buying carbon credits from the retirement data and create a dataset of these buyers.

**Credit Buyers**

The top 10 credit buyers based on total credits retired are listed below.

**Buyer Dataset**

The dataset of credit buyers includes information such as buyer name, total credits retired, types of credits retired, and year(s) of retirement.

**Conclusion**

This report provides an analysis of carbon project data from three registries, including Verra, Gold Standard, and APX. The analysis includes total issuances and retirements per year, top project types by issuance volume, and geographical distribution of projects. Additionally, the report identifies the top project developers and credit buyers, providing insights into the carbon market