**Gamma link:** [**https://gamma.app/docs/Database-project-MzuriFarming-7gbvsroy6fxvrod**](https://gamma.app/docs/Database-project-MzuriFarming-7gbvsroy6fxvrod)

**SDG Selection and Problem Definition**

**MzuriFarming SDGs**

**SDG 13: Climate Action**

**Relevance of MzuriFarming:**

* **Agriculture's Role**: Agriculture contributes around 24% of Uganda's Gross Domestic Product (GDP) and provides employment for over 70% of the population. In East Africa, the agricultural sector is similarly vital, with millions depending on it for their livelihoods.
* **Climate Impact**: According to the Intergovernmental Panel on Climate Change (IPCC), East Africa is experiencing significant climate variability, with temperatures increasing at a rate of approximately 0.2°C per decade, which is faster than the global average.
* **Weather Extremes**: The World Bank reports that the frequency of extreme weather events, such as droughts and floods, in East Africa has increased significantly. For example, Uganda has experienced a 20% increase in the frequency of extreme rainfall events over the past 30 years.

**Problem Definition:**

* **Access to Weather Data**: A study by the African Development Bank (AfDB) indicates that around 80% of smallholder farmers in Uganda do not have access to reliable, localized weather forecasts.
* **Impact on Yields**: The Food and Agriculture Organization (FAO) estimates that climate change could reduce crop yields in East Africa by up to 30% by 2050 if current practices continue.

**Specific Problem Statement:**

* **Yield Reduction**: According to a 2023 report by the Uganda Bureau of Statistics, erratic weather patterns have led to a decrease in average maize yields from 2.5 tons per hectare to 1.8 tons per hectare over the past decade.

**SDG 9: Industry, Innovation, and Infrastructure**

**Relevance of MzuriFarming:**

* **Technological Adoption**: Data from the International Food Policy Research Institute (IFPRI) reveals that only about 10% of farmers in East Africa use modern agricultural technologies or data-driven tools.
* **Infrastructure Gaps**: The World Bank estimates that infrastructure development in the agricultural sector in East Africa lags behind, with only 40% of rural areas having access to reliable road networks, which impedes the distribution of agricultural inputs and products.

**Problem Definition:**

* **Data-Driven Tools**: A survey by the East African Farmers Federation (EAFF) found that 90% of farmers in Uganda do not use precision agriculture tools or advanced data analytics for decision-making.
* **Innovation and Productivity**: According to a 2022 report by the International Fund for Agricultural Development (IFAD), productivity in the East African agricultural sector is 50% lower compared to global averages due to limited access to modern technologies and infrastructure.

**Specific Problem Statement:**

* **Productivity Constraints**: The FAO reports that productivity in East African agriculture has stagnated or declined due to a lack of modern tools, with potential losses estimated at up to $5 billion annually for the region.

**Summary**

By addressing these statistics and the related problems, MzuriFarming can effectively contribute to improving agricultural resilience, fostering innovation, and supporting sustainable development in Uganda and East Africa.