**Topic:** **Unveiling Regional Trends in Crop Pest and Disease Prevalence: A Data-Driven Approach for Enhanced Agricultural Resilience in Nigeria**

**Description:**

Nigeria, a nation renowned for its agricultural prowess, faces a formidable challenge in safeguarding its crop yields from the relentless onslaught of pests and diseases. To effectively combat these threats, a comprehensive understanding of their prevalence across diverse Nigerian regions is crucial. This project delves into this critical domain, employing a data-driven approach to uncover the intricate patterns that govern crop pest and disease distribution.

Leveraging the power of Power BI, pandas, Jupyter notebook, SQL, and GitHub, this project meticulously analyzes a vast trove of agricultural data. By meticulously scrutinizing this data, we aim to illuminate key insights that will revolutionize agricultural practices and policies.

The project's overarching goal is to empower stakeholders with actionable knowledge, fostering the development of targeted agricultural interventions and effective pest management strategies. By shedding light on regional trends in crop pest and disease prevalence, we pave the way for a more resilient and prosperous Nigerian agricultural sector.

**Key Objectives:**

* Identify the most prevalent crop pests and diseases in different Nigerian regions.
* Analyze the factors that contribute to the regional distribution of crop pests and diseases.
* Develop predictive models to forecast future outbreaks of crop pests and diseases.
* Formulate recommendations for targeted agricultural policies and effective pest management strategies.

**Expected Outcomes:**

* A comprehensive understanding of crop pest and disease prevalence in diverse Nigerian regions.
* The development of predictive models for forecasting crop pest and disease outbreaks.
* The formulation of targeted agricultural policies and effective pest management strategies.
* A more resilient and prosperous Nigerian agricultural sector.

**Tools and Technologies:**

* Power BI: Data visualization and analysis
* pandas: Data manipulation and analysis
* Jupyter notebook: Interactive coding environment
* SQL: Data querying and retrieval
* GitHub: Version control and collaboration

**Data Sources:**

* Nigerian Agricultural Extension Service (NAERLS)
* Federal Ministry of Agriculture and Rural Development (FMARD)
* Food and Agriculture Organization of the United Nations (FAO)
* World Bank

**Target Audience:**

* Policymakers in the Nigerian agricultural sector
* Agricultural extension officers
* Farmers and agribusinesses
* Researchers and academics in the field of agriculture

**Project Impact:**

* Enhanced agricultural productivity and food security in Nigeria
* Reduced pesticide use and environmental impact
* Improved livelihoods of farmers and agribusinesses
* Strengthened resilience of the Nigerian agricultural sector to climate change and other threats