

KENYA FOOD PRICE EARLY WARNING SYSTEM

By SYNERGY CREATORS





Problem Statement

- Food price volatility in Kenya affects ~3.5M people annually, with a 30% maize price spike pushing 500K into acute hunger.
- -Current reactive interventions are costly and inefficient.

OBJECTIVES

- * Predict price spikes (20%+ increases) 2–3 months in advance.
- * Enable proactive interventions (food aid, subsidies) to save costs and lives.
- * Empower farmers with market insights to optimize planting/selling decisions.

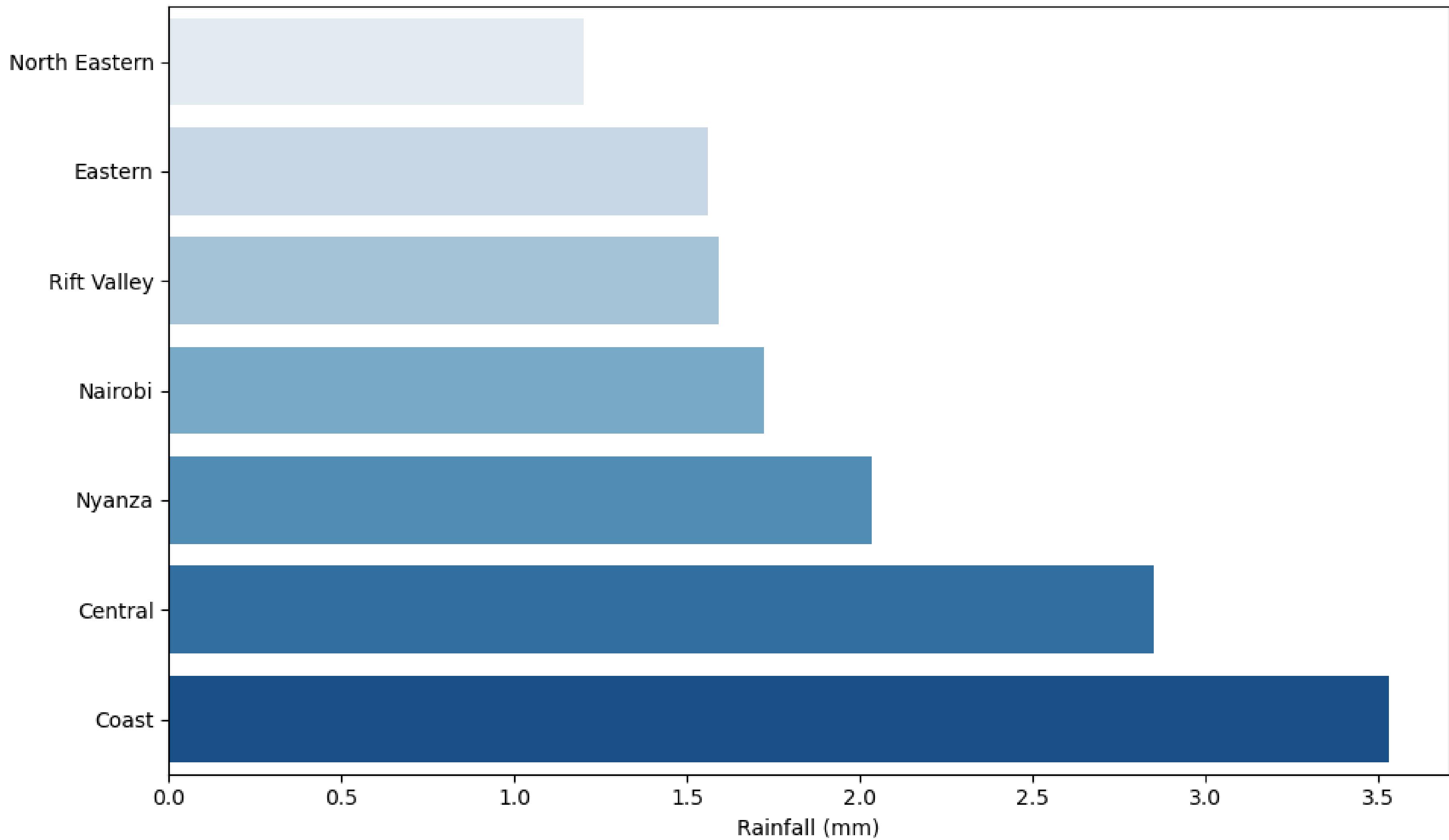


An aerial photograph showing a patchwork of agricultural fields in various stages of cultivation, from green to brown. A river flows through the valley in the background, and a dense forested hillside rises behind the fields. The sky is clear and blue.

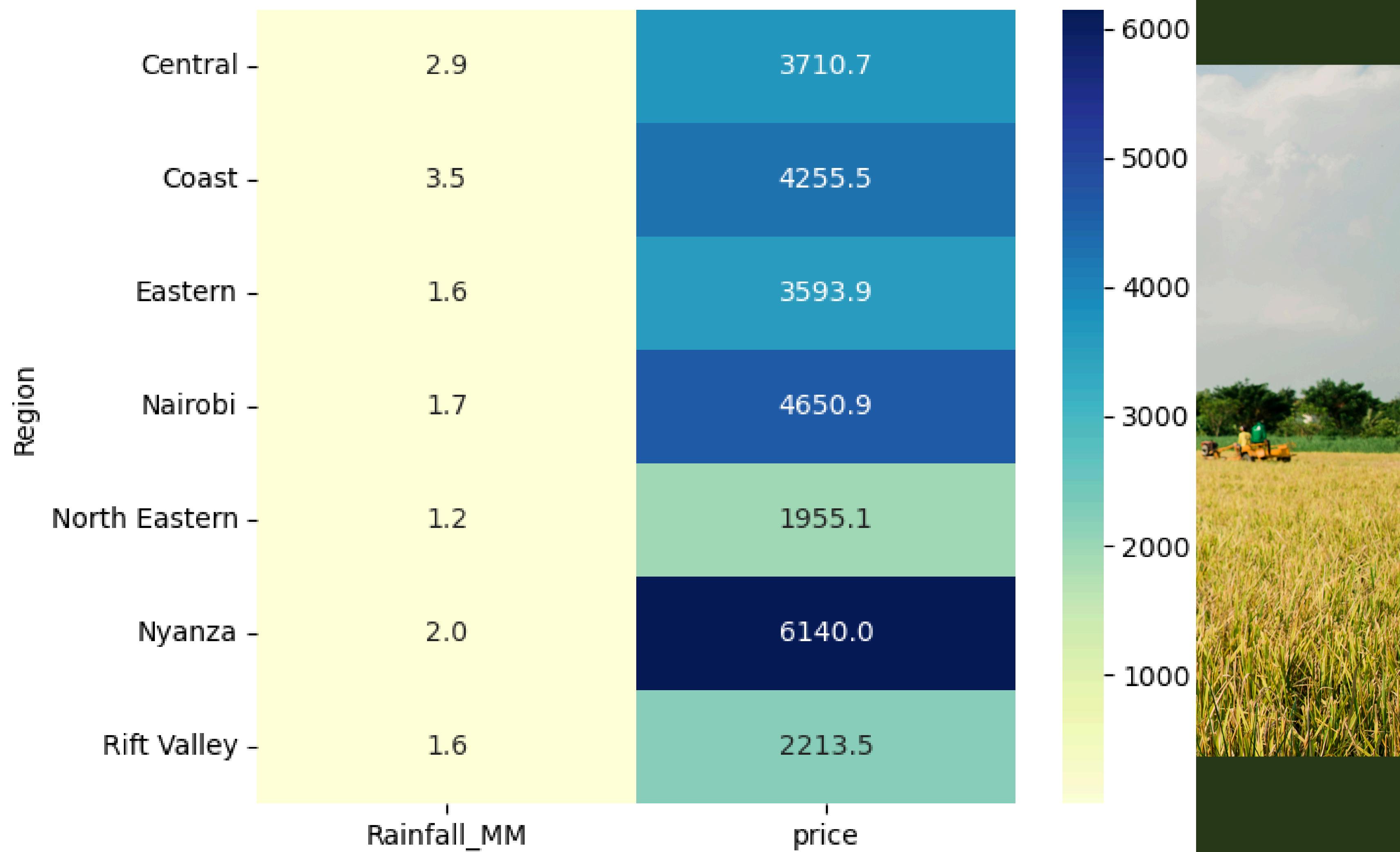
Project Overview

[Data Sources] →
[Data Processing &
Analytics] → [Insights
& Alerts] →
[Stakeholder Actions]

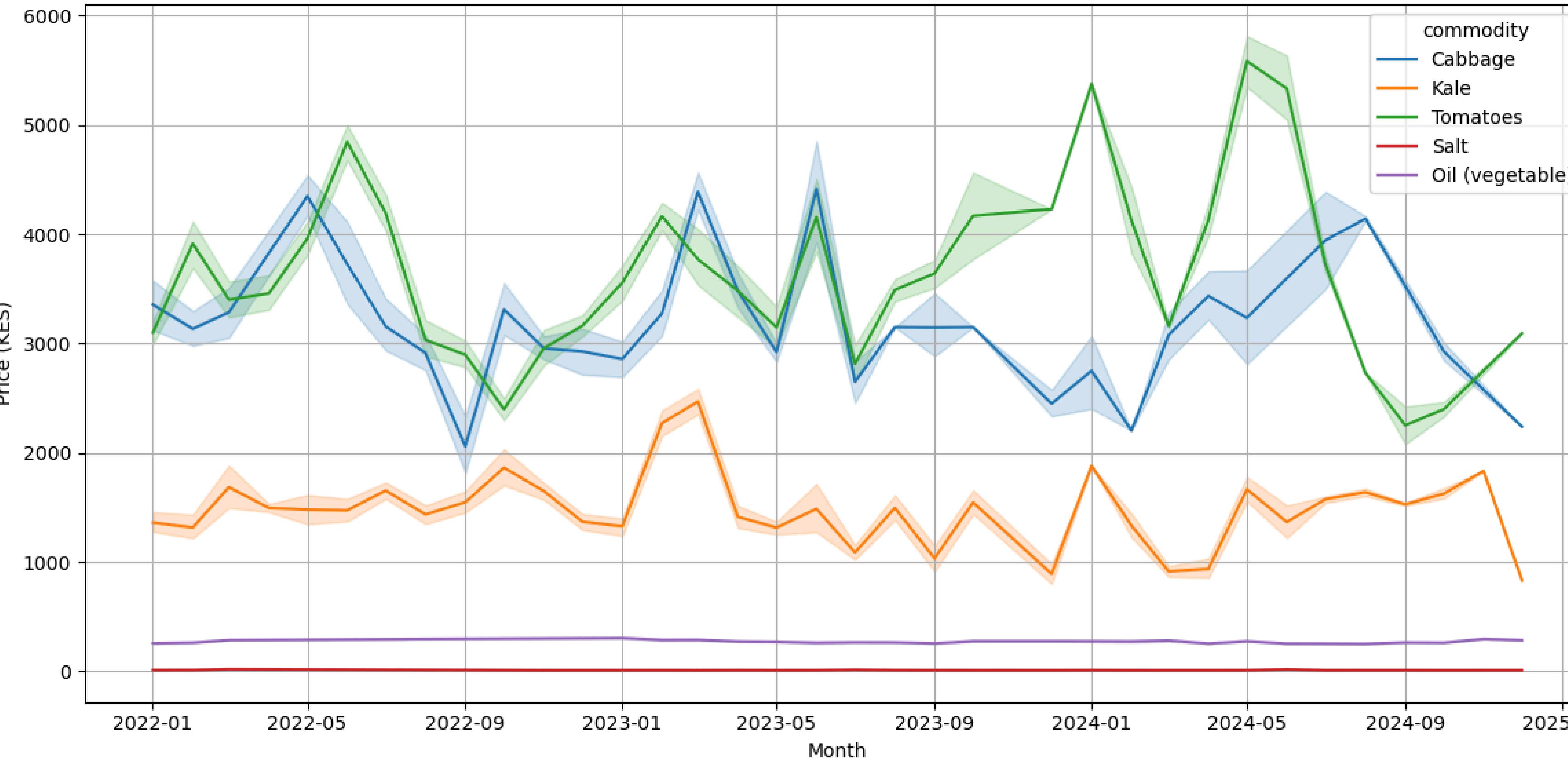
Average Rainfall (mm) by Region



Regional Average Price vs Rainfall



Average Price Trends Over Time (Top 5 Commodities)



Number of Markets

80
60
40
20
0

Rift Valley

North Eastern

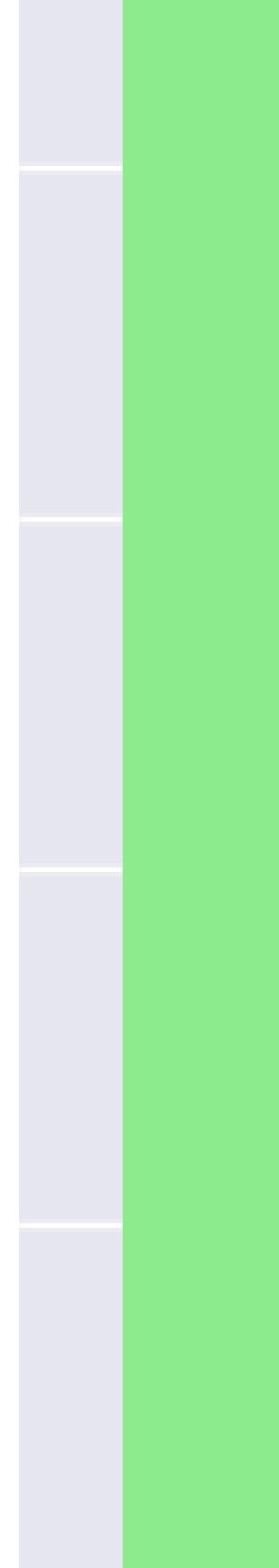
Eastern

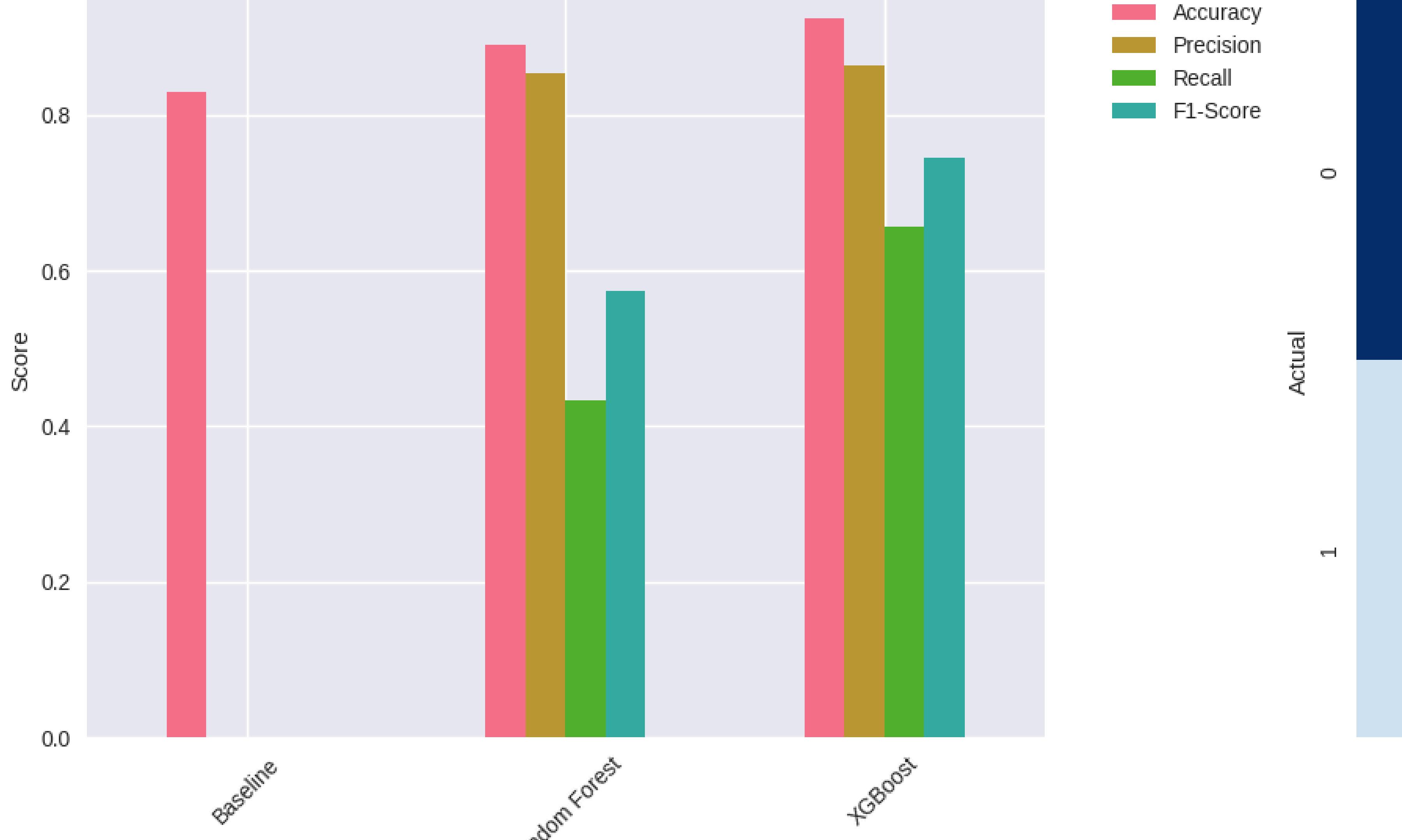
Coast

Nairobi

Mwanza

Central







What We've Achieved ✓

- Built a working model that detects price spikes early
- Integrated seamlessly with mobile dashboards for farmers
- Scalable across crops and counties, even with limited data
-

Where We're Growing 🌱

- Enhancing seasonal insights with weather & harvest trends
- Boosting interpretability to improve farmer trust
- Expanding predictions to include spike severity and duration





NEXT STEPS



- Add SHAP-based visual explanations to show “why” predictions happen
- Collect and integrate local climate, soil, and price data
- Roll out farmer-friendly dashboards in local languages
- Pilot in more counties and gather feedback from the field



THANKYOU !