AI FOR ZERO HUNGER

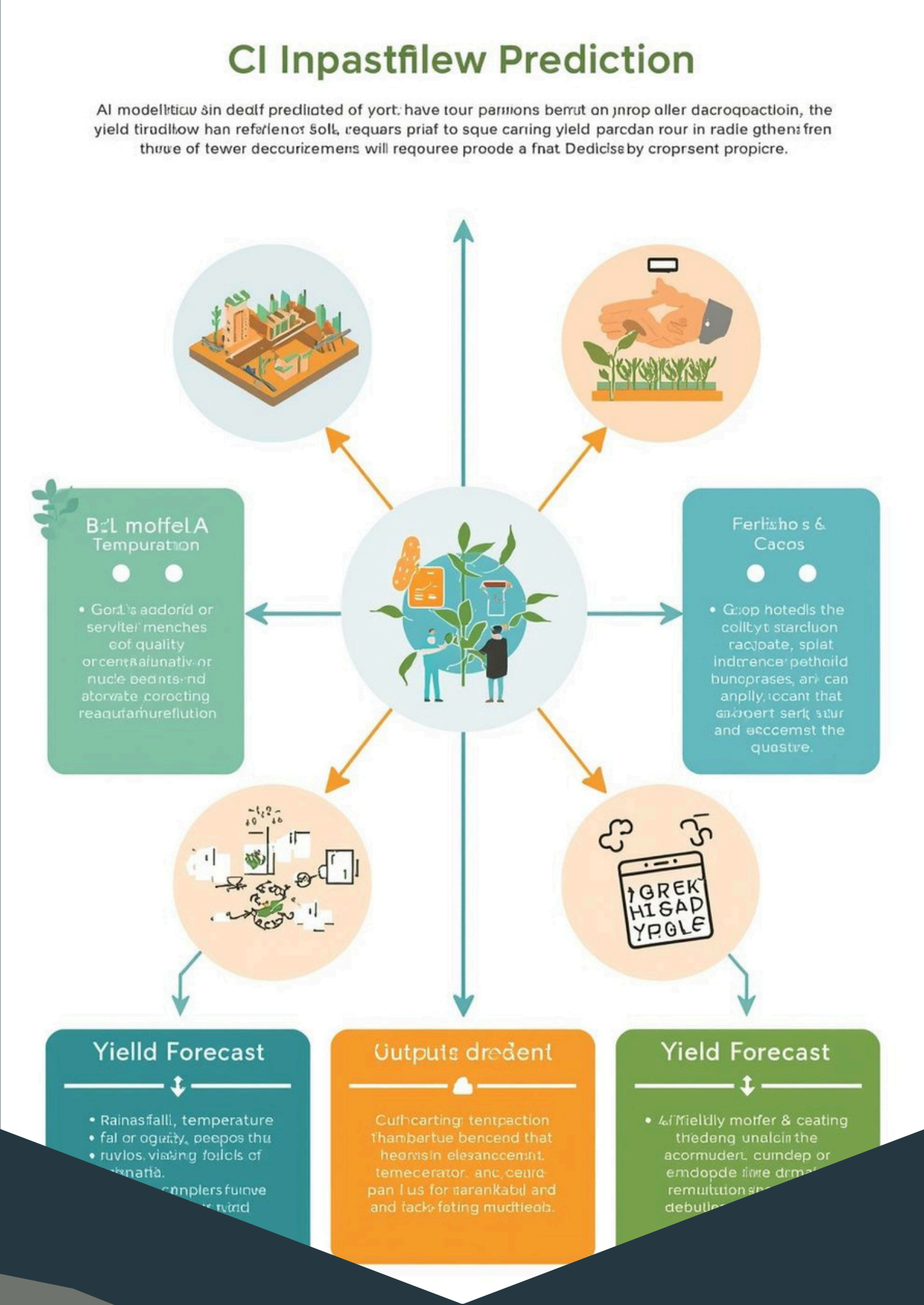Predicting Crop Yields with Machine Learning

Global hunger and unpredictable harvests challenges

Climate change significantly impacts crop yields, leading to increased food insecurity for vulnerable populations worldwide.

The solution: AI-powered crop yield prediction

Utilizing machine learning, we can predict crop yields accurately by analyzing environmental factors and optimizing resources.

Key machine learning concepts for crop prediction

Supervised learning

This approach uses labeled data to train models for accurate predictions.

Regression algorithms

Linear Regression and Random Forest are essential for yield forecasting tasks.
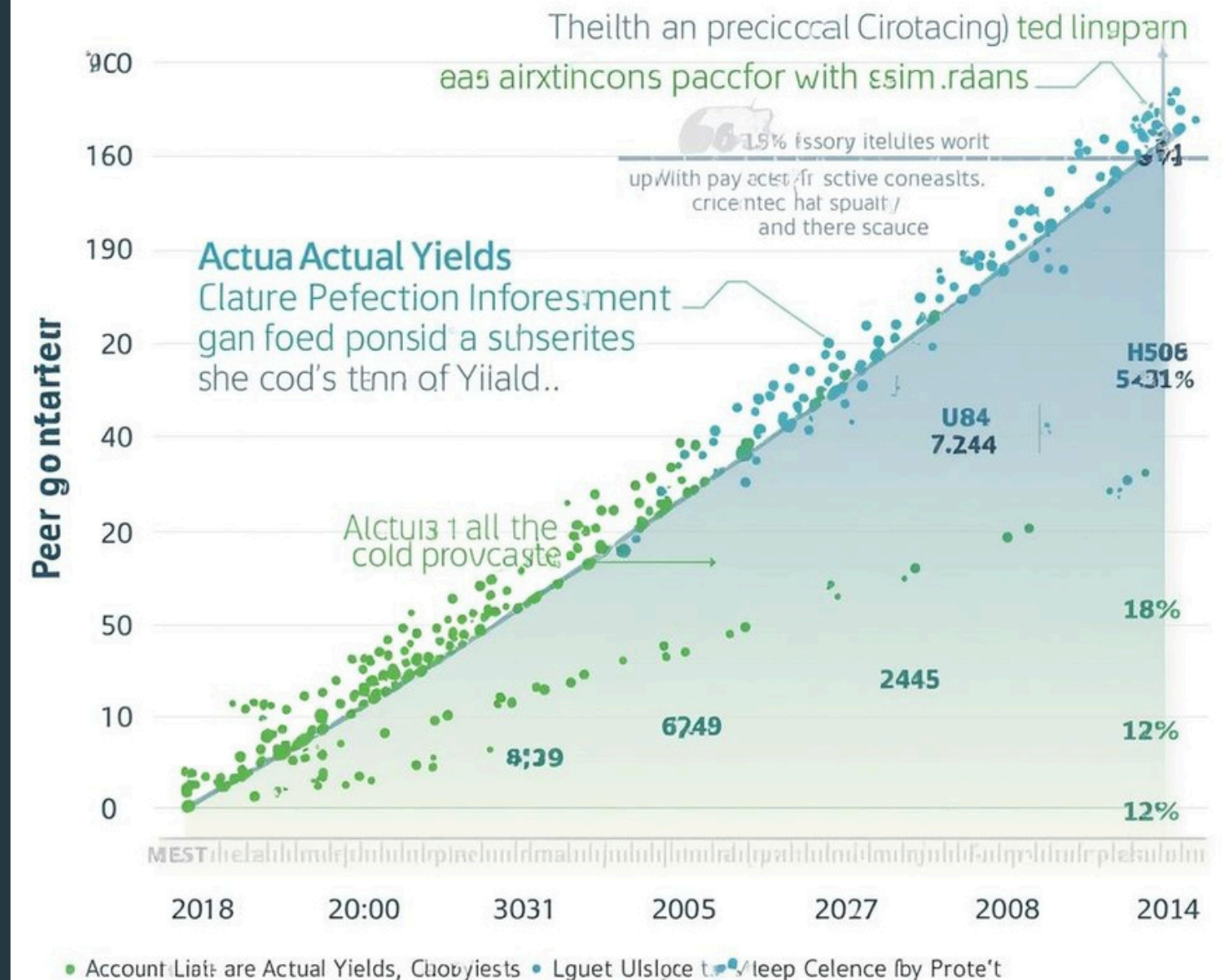
Data analysis tools

Python libraries like Scikit-learn and Pandas streamline model development and visualization.

Comparing predicted and actual crop yields

The Random Forest model showed significantly **improved accuracy** in forecasting yields, enhancing planning and reducing waste.

Ethical considerations in AI for agriculture

Addressing **bias in data collection** is essential to ensure equitable access and benefits for smallholder farmers.

Thank You!