# AgriLink – AI-Powered Agricultural Market & Export Platform

AgriLink is a mobile and web-based platform designed to connect farmers, traders, and exporters in the agricultural market. It provides real-time crop market rates, AI-powered demand and price forecasting, and a transparent digital marketplace for local and global trade. The system helps farmers in Pakistan and other developing regions access fair prices, reduce middlemen involvement, and explore export opportunities.

## Problem Statement

Farmers and exporters in Pakistan face challenges like lack of real-time market data, price manipulation by intermediaries, and limited access to global markets. AgriLink addresses these issues through a digital ecosystem that offers transparency, AI-driven insights, and blockchain-based trade verification.

## Core Features

* 🧾 Live Market Prices – Real-time updates of crop prices (wheat, rice, maize, etc.) across regions.
* 📈 AI-Powered Price Forecasting – Predicts market trends using historical and weather data.
* 🌍 Export Market Access – Connects local producers with global buyers and exporters.
* 🧠 Smart Recommendation System – Suggests profitable crops based on region and season.
* 🔐 Blockchain Trade Verification – Uses smart contracts for secure payments and delivery tracking.
* 💬 Communication Portal – Enables direct messaging between farmers, traders, and buyers.

## AI Use Cases

* Predictive Analytics for crop price forecasting.
* Recommendation system for crop selection and export targeting.
* Weather-aware crop yield prediction using real-time data.
* Sentiment analysis on global commodity news for export planning.

## Tech Stack

📱 Mobile App: Flutter / SwiftUI  
💻 Web Dashboard: React.js / Next.js  
⚙️ Backend: Node.js / FastAPI  
🗄️ Database: MongoDB / Firebase  
🧠 AI Models: Python (TensorFlow, scikit-learn, Prophet)  
🔗 Blockchain (Optional): Solidity + Polygon / Hyperledger  
☁️ Hosting: AWS / Google Cloud / Firebase

## Implementation Plan

• Month 1 – Market research and dataset preparation  
• Month 2 – Backend and AI model development  
• Month 3 – Mobile and web UI implementation  
• Month 4 – API integration and AI forecasting module  
• Month 5 – Testing, blockchain layer, and deployment

## Expected Outcomes

* Real-time agricultural market transparency
* Empowered farmers with direct market access
* Efficient export management and analytics
* Use of AI and blockchain for measurable economic impact

## Suggested Titles

* AgriLink: AI-Based Agricultural Market & Export Platform
* AgriSmart: Predictive Crop Trading and Market Analytics System
* AgroChain: Blockchain-Enabled Global Crop Trade Platform
* FarmConnect: AI-Powered Agriculture Marketplace