TRAE AI IDE: ZERO LIMITS HACKATHON
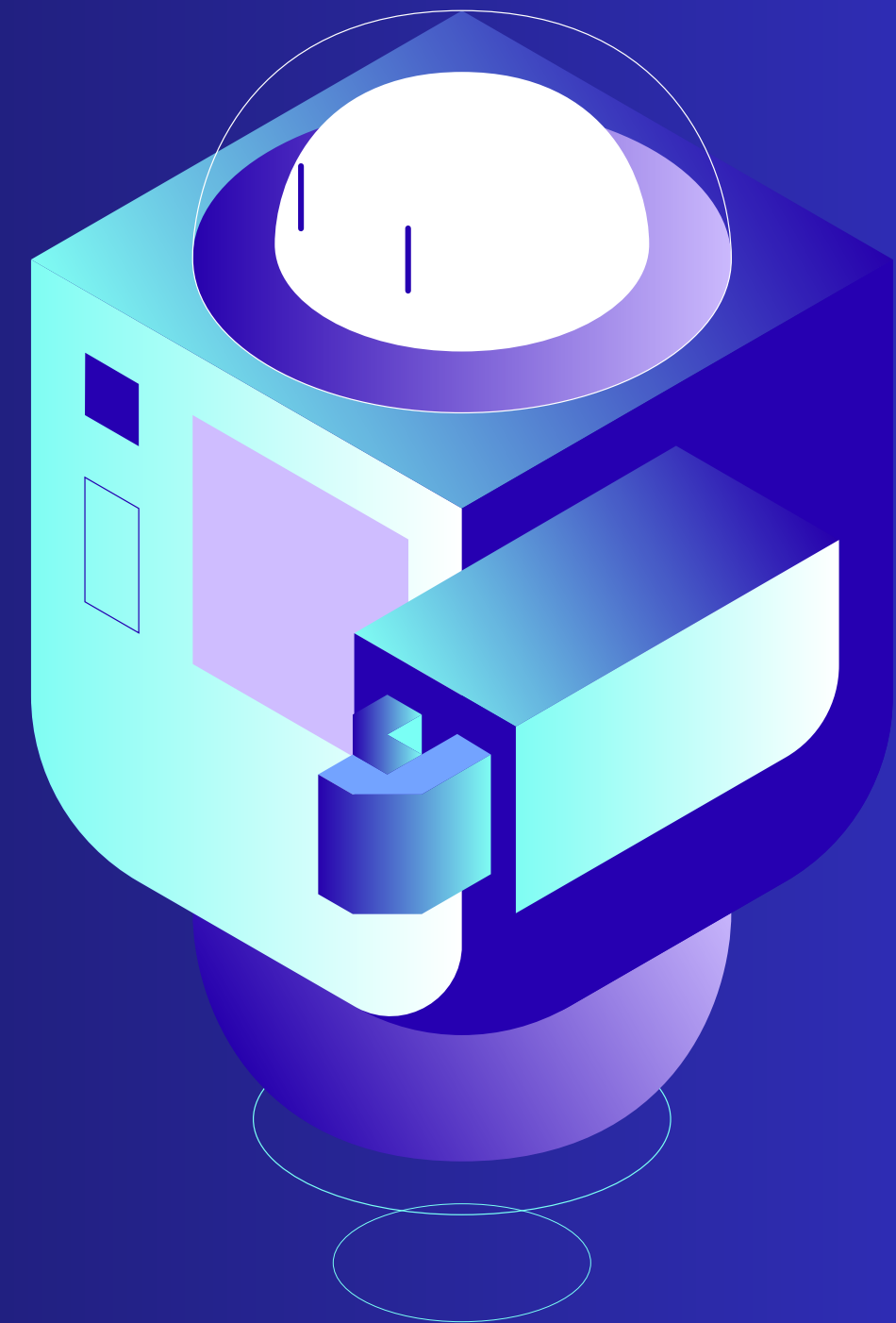
MEET OUR TEAM

Nazia Ramzan
Team Leader

Nouman Yousaf
Software Engineer

Muhammad Qasim
Software Engineer

Fareeha Amir
Software Engineer

Muhammad Anas
ML Engineer

Taqi Javed
Software Engineer

PROJECT TITLE

AI Climate & Smart Farming Assistant
Empowering farmers with real-time climate intelligence

Click here

PROBLEM

Challenges Farmers Face:

- What to grow? When to grow?
- Unpredictable weather & climate change.
- No easy access to reliable air quality or rainfall data.
- Lack of personalized, data-driven farming support.
- "Farmers need an AI-powered assistant that understands weather, pollution, and sustainable agriculture."
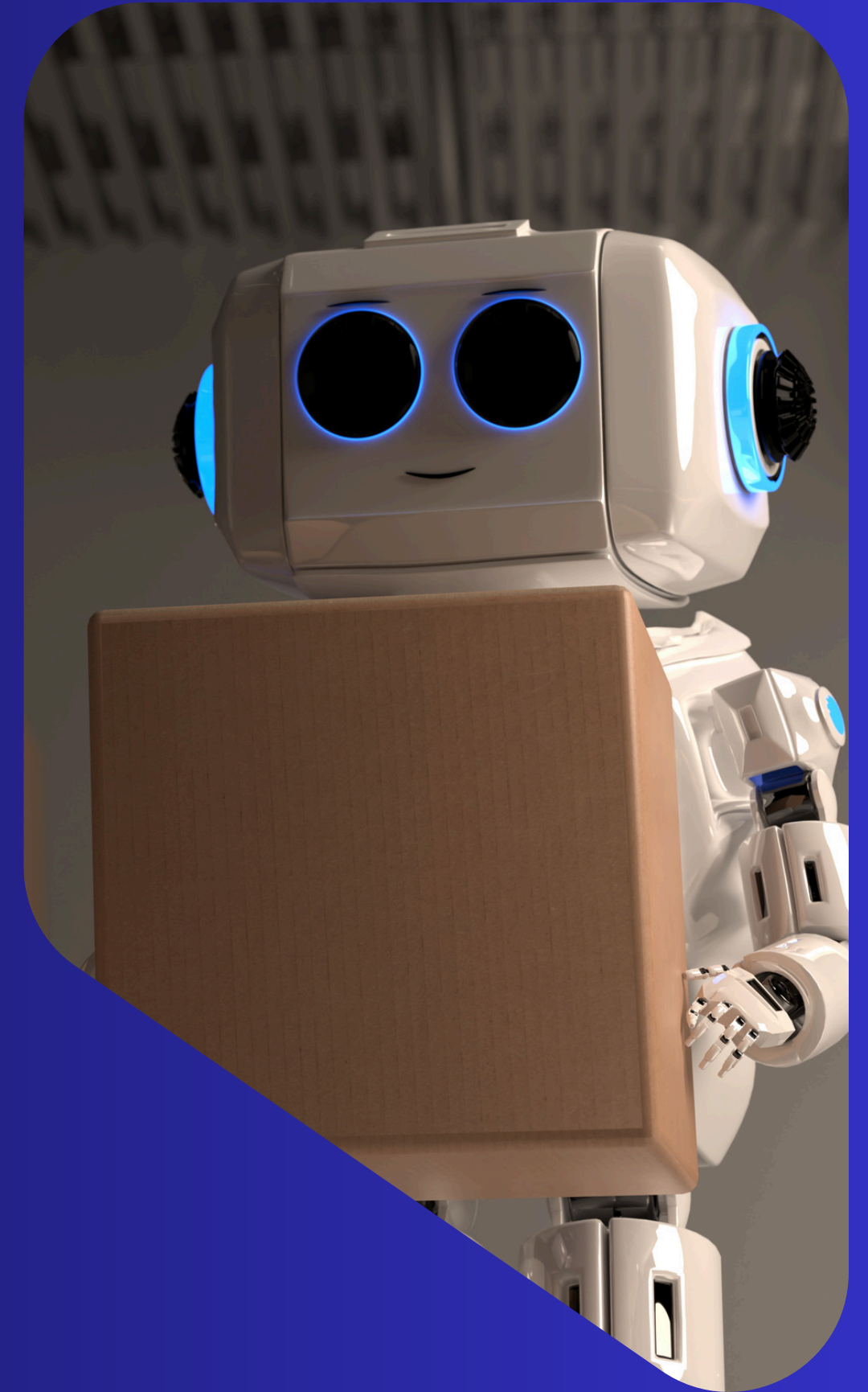
SOLUTION

Our AI Assistant Offers:

- Live weather and air quality reports.
- Climate predictions and rainfall patterns.
- AI chat support for farming recommendations.
- Downloadable PDF reports for decision-making.

Key Features:

- Multi-turn conversational AI (LLaMA 3).
- Weather & air APIs.
- Visualizations and CSV analysis.

DEMO

🔗 [Live Demo on Hugging Face](#)

Functional Modules:

- 🌾 AI Chatbot for Farming Advice
- 🌦️ Real-Time Weather & Air Quality
- 📊 Smart Farming Data Upload & Analysis
- 📄 PDF Report Generator

HOW IT WORKS

Architecture Flow:

- User inputs location or uploads data
- Weather + air data from Open-Meteo, AirVisual
- AI Model (LLaMA 3 on Groq) provides insights
- Data visualized with Plotly, exportable via PDF

Tech Stack:

- Streamlit (Frontend)
- Groq + LLaMA 3 (AI Engine)
- Open-Meteo, AirVisual (API'S)
- Plotly (Charts), FPDF (Export)

IMPACT

🌍 **Empowering Farmers Everywhere**

- Democratizes climate and agriculture intelligence
- Helps small farmers make data-driven decisions
- Promotes sustainability by informing climate-aware decisions
- Easily deployable in remote regions via web

INNOVATION HIGHLIGHTS

✨ **Why It Stands Out**

- AI-powered farming chatbot (context-aware)
- Real-time integration of climate + pollution data
- Visual analytics with Plotly
- Clean UI and offline report downloads

Thank You

Let's revolutionize agriculture together.

🔗 **Try the App**