**HACKATHON PITCH**

GOOD MORNING TO EVERYONE PRESENT HERE - HONORABLE JUDGES, RESPECTED TEACHERS, SENIORS AND MY DEAR BATCHMATES…

Let me take you to a small village at sunrise. A farmer wakes up before dawn, works all day tirelessly in his field under the hot sun, and yet, when the harvest comes, he earns barely enough to survive.

Why? Because he doesn't know which crop will truly thrive in his soil, how much water his field really needs, or how to protect his plants from sudden diseases. He has no reliable way to check the market price, no direct access to subsidies or loans. Most of the time, he follows guesswork, tradition or neighbor’s advice and when the rains fail or the market crashes, his entire year’s hard work went in vain. Farming for him is not a business; it's a gamble. And this is the harsh reality for millions of farmers in our country today.

Now imagine-if that same farmer had a guiding hand, a smart friend whispering: "This is the right crop, this is the right time, this is the right way." His life would change forever.

So, for them we created an Al-powered mobile app that acts like a personal farming assistant, available anytime, anywhere, in the language the farmer understands best - Hindi, English, or Bengali. With this app, farming is no longer guesswork, it becomes smart work.

Our app brings together multiple powerful features in one place. It provides personalized crop recommendations, guidance on irrigation, fertilizer, and pesticide usage, weather forecasting, plant disease detection through image recognition and many more. Farmers can track real-time market prices, see which crops are in profit or loss, and access direct links to subsidies, loans, and trusted farming products. To make it even more accessible, we' ve added voice support in local languages, a resource hub with modern farming techniques, and a farmer-to-farmer community where they can share experiences and solve problems together. And the best part - it works even on 2G and 3G networks, with offline support coming soon.

SO,

Behind this innovation is our passionate team.

**Sumit**: Hello Everyone, I'm Sumit, the team leader of CropNexas. I made sure our vision stayed clear - to build something that truly helps farmers. From guiding the team to coordinating every step, my focus was on keeping us united and turning our idea into a working solution.

**Debasish**: I'm Debasish, the backend developer. I worked on the backend - the engine of our project. I built the APIs and server logic so that whenever a farmer asks for help, our system processes the data instantly and gives reliable recommendations.

**Sneha**: I'm Sneha, and my role was to build and manage the database. Using MongoDB Atlas, I made sure all the soil, crop, and weather data is stored safely and can be fetched quickly. My work helps the app stay smooth and accurate for farmers.

**Mrittika**: I'm Mrittika, I handled the Al and ML models from Decision Trees to LSTM networks. These models predict the best crops, yield, and even weather patterns. My aim was to make the app intelligent, so farmers get scientific and data-driven advice.

**Manab**: I'm Manab, the cybersecurity expert. Farmers' data is sensitive, so I implemented SSL, encryption, and secure logins. My role was to make sure they can trust our platform without worrying about privacy.

**Subhadip**: "And I'm Subhadip, the UI/UX designer. I worked on the design and user experience. Our farmers shouldn't struggle with technology, so I designed the app to be simple, clean, farmer-friendly interface with local language support so even first-time users can benefit easily.

Now let me talk about how the system works. A farmer opens the app, selects his preferred language, and logs in. On the dashboard, he sees options like crop recommendation, irrigation system, weather forecast, disease detection and many options. Suppose he chooses crop recommendation - he simply enters his location, uploads a soil picture, and answers a few basic questions. Within seconds, a complete report is generated about the best crops for his land, which he can download or listen to in his chosen language. If he wants a deeper analysis of his soil, he can upload another image and get every detail. For irrigation, the app tells him exactly how much water to use, when to use it, and how much fertilizer or pesticide to apply. And when it comes to the market, the app shows real-time prices, helping to him choose crops that will actually give him profit. Behind the scenes, we have already trained the system with over fifty thousand images covering fifty types of plant diseases, using authentic datasets like the Bhuvan API, Kaggle for soil and weather data.

In short, this app is not just a piece of technology – It’s a hope. It’s a partner for farmers, guiding them, protecting them, and giving them the confidence to grow smarter and earn better. With this, no farmer will have to gamble his future anymore. Judges, we are not just building an app, we are sowing the seeds of a revolution in agriculture. Hope, this will really help them to overcome their problem and we promise that in future we will work more on this.

THANK YOU...