**AI in Agriculture(End to end project)**

**Potato disease prediction using CNN:**

1. **Data collection**
2. **Model building**
3. **ML Ops**
4. **Deployment (Google cloud) + React android deployment**

**Diseases in potato are Early blight (caused by fungus) and late blight (caused by specific bacteria)**

**Atliq Agriculture started this project and thought of building a mobile application which would be provided to the farmers and they can take a picture and it will tell them if plant is having disease. Deep learning and CNN are used in the backend and a simple mobile app is created using React.**

**Categorical Classification : Normal , Early blight and Late blight.**

**Step 1 : Data Collection**

**Step 2 : Data cleaning and preprocessing (data augmentation)**

**Step 3 : CNN implementation**

**Step 4 : Transfer learning tech for better accuracy of model**

**Step 5 : Simple Gradio deployment**

**Step 6 : ML Ops (tf serving) fast api**

**Step 7: React Nati for android development and web dev**

**Step 8: Google cloud (AWS Lambda)**

**Techstack:**

**Model building: Tensorflow, cnn, data augmentation, tf\_dataset**

**Backend servers: fast api, tf server**

**Model optimization : Quantization, Tensorflow Light**

**Frontend and Deployment: Gcp deployment, React JS (android dev), React native(web dev).**