**Future Scope**

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* Real-time quality control: The system can be integrated into automated sorting lines to detect spoilage instantly, making food processing faster and safer.
* Wider variety recognition: With more data, the model can be trained to detect rot in many different fruits and vegetables, even under various lighting or packaging conditions.
* Mobile or IoT deployment: Future versions could run on smartphones, drones, or smart cameras in farms, warehouses, or stores for on-the-spot inspection.
* Improved model generalization: As more diverse datasets are collected, the system can get better at identifying spoilage across different seasons, storage methods, and regional produce.
* Sustainable farming and supply chain optimization: It can help farmers, suppliers, and retailers minimize waste and improve decision-making by removing bad produce early.