**Aims and Objectives**

* Build an AI system that accurately distinguishes between fresh and stale produce.
* Collect and organize a diverse dataset.
* Develop a deep learning model with high classification accuracy.
* Apply data augmentation to improve model generalization.
* Study the effect of dataset size on performance.

| **Item** | **Details** |
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| Dataset Preparation | Organize and augment dataset for training, validation, and testing. |
| Deep Learning Models | Train multiple CNN architectures; select the best performing one. |
| Model Evaluation Report | Document model performance (accuracy, precision, recall, training time). |
| Final Model File | Deliver trained .h5 model file ready for deployment. |
| Error Analysis Report | Analyze misclassifications and propose improvements. |
| (Optional) Demo App | Small web app (Streamlit) to upload images and predict fresh/stale status. |
| Code Repository | Full project code with documentation and instructions. |