Descriptions of All Files Provided:

**01/27/23 Meeting Notes**: Meeting notes from 01/27/23 weekly meeting. Recorded notes from presentation given by Dr. Navani.

**NGO Partner Data Collection V.1**: Finalized data collection pipeline directions following discussion with Dr. Navani and Giffin. These steps asked for pictures of both uncooked and cooked foods from the DRC to gather an idea of what types of images we could receive from our partners in the DRC.

**YOLO Object Detection Write Up:** Write up of a comparison and contrast of three object detection methods, namely YOLO Darknet, R-CNN, and Single Shot Detector. We chose YOLO due to the ease of use and high performance on limited datasets.

**DRC Data Image Review**: Review of the first set of images received from the DRC, mainly revolving around fruits and vegetables with some meats mixed into the set of images.

**Food Recognition Paper Notes**: Notes from some of the research papers read at the start of the project to gather an idea of what the problem is and what has been done so far.

**04/28/23 Meeting Thoughts**: Notes for the 04/28/23 weekly meeting. This meeting was focused on data augmentation, and thus the document focuses mainly on data augmentation techniques and the reasoning for the augmentations we used.

**05/10/23 DRC Presentation**: Presentation made for our partners in the DRC. The presentation focused on giving our partners a general overview of what we were doing on the back end, with data gathering, labeling, augmentation, and the end result.

**05/23/23 Meeting Notes**: Notes focus mainly on finishing the labeling of our fruits and vegetables dataset along with some data about some preliminary training with YOLO on the dataset to experiment with performance.

**06/08/23 Meeting Notes**: Notes cover a wide range of topics, including labeling, cooked food labeling, and different YOLO versions. This week focused primarily on training on-device versus training on the back-end versus inference on-device, which is covered at the end.

**06/20/23 Meeting Notes**: Focused on on-device implementations of inference, with the notes containing references and links to other projects that have done on-device inference.

**YOLO Model Training Documentation**: Write-up on the model training process. Included documenting labeling, training, and validation process.

**YOLO Web Scraping Documentation**: Write-up on the web scraping process used to scrape fruit and vegetable images off of the internet. Link to the GitHub repository used included.

**EpiNu Project Reflections**: Reflections and thoughts on data collection, data labeling, image augmentation, and model training.

**YOLOv7 Training Script.ipynb**: Google Colab notebook used to train our YOLOv7 model on our labeled RoboFlow dataset.

**DRC Inferece.ipynb**: Steps for inference provided for our partners in the DRC. Goes through step by step on how to import images, weights, and to perform inference using those weights on their images.

**best-yolov5.pt:** Best weights trained using Ultralytics and YOLO-v5.

**best-yolov7.pt**: Best weights trained using YOLOv7 using the Colab notebook provided in this folder.