Summary of Contributions

In this research, an extensive collection of images was gathered, showcasing various types of date fruits as well as the trees from which they are harvested. These images were captured from multiple angles, sides, and distances, ensuring a comprehensive representation of each object. By capturing numerous images of the same object from different perspectives. One of the most major issues in agricultural data collection has been directly addressed by obtaining several photos of the same object from different viewpoints. This endeavor guarantees that researchers and developers have access to a diverse variety of visual data, which is sometimes difficult to get in agricultural research.

In addition to the images, the characteristics and attributes of each date and tree were recorded, adding value to the data in the research domain and making it a useful resource for academics in a variety of fields.

The primary objective of collecting this dataset is to support the development of a virtual reality (VR) environment. Within this VR setting, several 3D models of the date fruits and trees will be created, providing a realistic and immersive representation of these agricultural objects. This might be used for a multiple purposes, including agricultural training, educational tools, and even commercial enterprises.

The potential uses of this dataset extend far beyond virtual reality. For instance, the dataset can be applied to the training of supervised visual models to recognize and classify different types of dates and trees with high accuracy. Moreover, the dataset could be employed to fine-tune pretrained models, thereby improving performance in related tasks. Finally, the dataset could be used to generate new images of dates and trees. This could be particularly useful for data augmentation, filling in gaps in the dataset, or generating realistic images for use in simulations or other applications.