Comprehensive List of 50 Publicly Available Fruit Datasets

1. FruitSeg30

Description: 1,969 high-res images across 30 fruit classes with pixel-wise masks for segmentation.

Modality: Image + Masks

Domain: Segmentation/Recognition

Link: https://data.mendeley.com/datasets/vkht8pfsp3/3

License: CC BY 4.0

2. Fruit Recognition (SCUT/Zenodo)

Description: 44,406 images of 9 fruit types captured under varying lighting/angles for recognition.

Modality: Image

Domain: Classification

Link: https://zenodo.org/records/1310165

License: Open (check page)

3. Fruits-360 (Original/100x100)

Description: Large fruit/vegetable dataset; >130k images across ~200 classes; rotating-fruit capture.

Modality: Image

Domain: Classification/Transfer Learning

Link: https://github.com/Horea94/Fruit-Images-Dataset

License: MIT / CC BY-SA (see repos)

4. FruitNet (Indian Fruits, Quality)

Description: ~14.7k images of 6 Indian fruits labeled Good/Bad/Mixed quality.

Modality: Image

Domain: Quality/Defect Classification

Link: https://data.mendeley.com/datasets/b6fftwbr2v/3

License: Research (check page)

5. Fresh/Rotten/Formalin-mixed Fruit

Description: >10k raw images expanded to >81k via augmentation across 5 fruits; fresh/rotten/formalin-mixed.

Modality: Image

Domain: Quality/Contamination

Link: https://data.mendeley.com/datasets/xkbjx8959c

License: Open (check page)

6. DeepFruits (Multi-fruit scenes)

Description: 21,122 images of 20 fruit types in mixed combinations; CSV multilabels.

Modality: Image + CSV

Domain: Multi-label/Counting/Calorie Estimation

Link: https://data.mendeley.com/datasets/5prc54r4rt

License: Open (check page)

7. Date Fruit Detection (Zenodo)

Description: 9,092 images/videos of date bunches at different maturity stages.

Modality: Image + Video

Domain: Detection/Harvesting

Link: https://zenodo.org/records/7224690

License: CC BY 4.0

8. MinneApple

Description: 1,000 orchard images with >41k apples annotated with polygon masks.

Modality: Image + Masks

Domain: Detection/Segmentation/Counting

Link: http://rsn.cs.umn.edu/index.php/MinneApple

License: Research (check site)

9. LivingOptics Hyperspectral Fruit

Description: 100 images with sparse spectral samples and masks; 430k+ spectra; 19 classes.

Modality: RGB + Hyperspectral + Masks

Domain: Spectral Classification/Segmentation

Link: https://huggingface.co/datasets/LivingOptics/hyperspectral-fruit

License: See page

10. LivingOptics Hyperspectral Orchard

Description: 435 orchard images with spectral samples and masks (Cox, Royal Gala, Pear).

Modality: RGB + Hyperspectral + Masks

Domain: Orchard Spectral Detection

Link: https://huggingface.co/datasets/LivingOptics/hyperspectral-orchard

License: See page

11. DeepHS Fruit v2

Description: Hyperspectral recordings for avocado/kiwi/persimmon/papaya/mango with ripeness labels.

Modality: Hyperspectral

Domain: Ripeness/Quality Estimation

Link: https://github.com/cogsys-tuebingen/deephs_fruit

License: See repo

12. Hyperspectral Blueberries (Zenodo)

Description: HSI cubes of 420 blueberries (good vs defective) for defect detection.

Modality: Hyperspectral

Domain: Quality/Defect Detection

Link: https://zenodo.org/records/11200576

License: See page

13. KFuji RGB-DS

Description: 967 multi-modal orchard images (RGB, depth) of Fuji apples; 12,839 apples annotated.

Modality: RGB-D (Kinect v2)

Domain: Detection in Orchards

Link: https://datasetninja.com/kfuji

License: See page

14. Fuji-SfM

Description: Annotated images and 3D point clouds for apples; masks + 3D positions.

Modality: RGB + 3D point clouds

Domain: 3D/Counting

Link: https://www.sciencedirect.com/science/article/pii/S2352340920304856

License: See paper

15. ACFR Orchard Fruit (MultiFruit 2016)

Description: 3,704 images; 17,607 labeled objects; classes: mango, apple, almond.

Modality: Image + BBoxes

Domain: Detection/Robotics

Link: https://data.acfr.usyd.edu.au/ag/treecrops/2016-multifruit/

License: Research (check site)

16. Embrapa WGISD (Wine Grape)

Description: Instance segmentation for grape bunches across 5 varieties in field conditions.

Modality: Image + Instance Masks

Domain: Viticulture/Segmentation

Link: https://github.com/thsant/wgisd

License: See repo

17. CERTH Grape Dataset

Description: ~2,500 images, ~10k grape bunches with masks and maturity levels.

Modality: Image + Masks + Maturity

Domain: Segmentation/Maturity Estimation

Link: https://www.mdpi.com/2073-4395/13/8/1995

License: See paper

18. LDD Grape Diseases

Description: 1,092 images; 17,706 labeled instances; grape leaves and clusters with disease labels.

Modality: Image + Instance Segmentation

Domain: Disease Detection

Link: https://arxiv.org/abs/2206.10192

License: See paper

19. Raspberry PhenoSet

Description: 1,853 images; 6,907 mask annotations across 7 phenological stages under controlled lighting.

Modality: Image + Masks

Domain: Phenology/Detection

Link: https://arxiv.org/abs/2411.00967

License: See paper

20. AppleGrowthVision

Description: 9,317 stereo pairs + 1,125 densely labeled images (31,084 apples); 6 growth stages.

Modality: Stereo RGB + Annotations

Domain: 3D/Phenology/Detection

Link: https://arxiv.org/abs/2505.14029

License: See paper

21. FruQ-DB

Description: 5,647 images extracted from time?lapse videos; 11 fruits; labels: Fresh/Mild/Rotten.

Modality: Image (from video)

Domain: Quality/Spoilage

Link: https://zenodo.org/records/7224690

License: Open (see page)

22. Strawberry-DS

Description: 247 orchard images with ripeness labels; benchmark for strawberry ripeness detection.

Modality: Image

Domain: Ripeness/Detection

Link: https://data.mendeley.com/datasets/z6dtfdpzz8

License: See page

23. Ripe Strawberries Detection (Kaggle)

Description: Photos of strawberries for identifying ripe berries; object detection labels.

Modality: Image + BBoxes

Domain: Ripeness Detection

Link: https://www.kaggle.com/datasets/trainingdatapro/ripe-strawberries-detection

License: Kaggle terms

24. Banana Ripe/Unripe (Mendeley)

Description: 1,340 banana photos with YOLO labels for ripe vs unripe classification/detection.

Modality: Image + YOLO txt

Domain: Ripeness Detection

Link: https://data.mendeley.com/datasets/y3649cmgg6/1

License: See page

25. Banana Classification (4 stages)

Description: Kaggle dataset with Unripe, Ripe, Overripe, and Rotten categories.

Modality: Image

Domain: Quality/Ripeness Classification

Link: https://www.kaggle.com/datasets/atrithakar/banana-classification

License: Kaggle terms

26. Mango Variety (PMC)

Description: Images of 6 mango varieties (Amrapali, Chaunsa, Fazli, Haribhanga, Himsagar) for classification.

Modality: Image

Domain: Varietal Classification

Link: https://pmc.ncbi.nlm.nih.gov/articles/PMC11748707/

License: See article

27. MangoImageBD

Description: High-res images of 15 mango varieties for species recognition.

Modality: Image

Domain: Varietal Classification

Link: https://www.sciencedirect.com/science/article/pii/S2352340925006328

License: See paper

28. MangoClassify-12

Description: 3,900 high-res images across 12 mango varieties with varied lighting/ripeness.

Modality: Image

Domain: Varietal/Quality

Link: https://www.sciencedirect.com/science/article/pii/S2352340925007590

License: See paper

29. CitDet Citrus Fruit Detection

Description: High-resolution images of citrus trees (HLB areas) with citrus fruit bounding boxes.

Modality: Image + BBoxes

Domain: Detection/Yield Estimation

Link: https://arxiv.org/html/2309.05645v2

License: See paper

30. Citrus Fruits and Leaves (Diseases)

Description: Healthy/infected citrus fruits and leaves (Black spot, Canker, Scab, Greening, Melanose).

Modality: Image

Domain: Disease Detection

Link: https://www.sciencedirect.com/science/article/pii/S2352340919306948

License: See paper

31. USDA FoodData Central

Description: Comprehensive nutrient composition data for raw/processed fruits; API + bulk CSV/JSON.

Modality: Tabular/API

Domain: Nutrition/Composition

Link: https://fdc.nal.usda.gov/download-datasets

License: CC0 (Public Domain)

32. USDA FNDDS

Description: Foods and Beverages, nutrient values, portions?survey foods incl. fruits (WWEIA/NHANES).

Modality: Tabular

Domain: Nutrition/Survey

Link: https://www.ars.usda.gov/nea/bhnrc/fsrg/docs/fndds/

License: Public domain

33. FAOSTAT (Fruits)

Description: Global production, yield, trade for fruit categories across countries (1961?present).

Modality: Tabular/API

Domain: Agri Statistics/Trade

Link: https://www.fao.org/faostat/

License: Open (FAO)

34. Eurostat Fruit & Veg Consumption

Description: EU-wide survey data on daily fruit/vegetable consumption by sex/age/education.

Modality: Tabular

Domain: Public Health/Nutrition

35. India Agmarknet Prices

Description: Daily mandi (market) prices for commodities incl. fruits; min/max/modal by market.

Modality: Tabular/API

Domain: Market Prices

Link: https://www.data.gov.in/resource/variety-wise-daily-market-prices-data-commodity

License: GODL-India

36. Open Food Facts

Description: Crowdsourced database (4M+ products) incl. fruit products; ingredients, nutrition, images.

Modality: Tabular + Images

Domain: Retail/Nutrition

Link: https://world.openfoodfacts.org/data

License: ODbL / CC BY-SA for images

37. Freiburg Groceries

Description: 5,000 images of 25 food classes incl. fruits; 256×256; for classification.

Modality: Image

Domain: Food Recognition

Link: https://github.com/PhilJd/freiburg_groceries_dataset

License: See repo

38. GroZi-120

Description: In vitro images + in situ shelf videos of 120 products; annotated frames.

Modality: Image + Video

Domain: Retail Recognition

Link: https://grozi.calit2.net/grozi.html

License: Research (see page)

39. GroZi-3.2k

Description: 3,235 Swiss retail shelf images + reference product images with detection annotations.

Modality: Image + BBoxes

Domain: Retail Detection

Link: https://github.com/tobiagru/ObjectDetectionGroceryProducts

License: See links

40. SKU-110K

Description: 11,762 densely packed shelf images; 110k+ SKU categories; bounding boxes.

Modality: Image + BBoxes

Domain: Retail Dense Detection

Link: https://github.com/eg4000/SKU110K_CVPR19

License: Academic use

41. Fruit-Box / FruitNet Box

Description: 2,509 images; 3,989 labeled objects including quality labels (good/bad) for apples, guava, oranges.

Modality: Image + BBoxes

Domain: Detection + Quality

Link: https://datasetninja.com/fruit-net-box

License: See page

42. Roboflow Fruit Detection (COCO subset)

Description: ~600 images re-labeled from COCO for fruit detection across many fruit classes.

Modality: Image + BBoxes

Domain: Object Detection

Link: https://public.roboflow.com/object-detection/coco-fruits

License: MIT/Roboflow terms

43. Roboflow Synthetic Fruits OD

Description: ~6,000 synthetic images with multiple fruits on random backgrounds for detection.

Modality: Synthetic Images + BBoxes

Domain: Detection/Augmentation

Link: https://public.roboflow.com/object-detection/synthetic-fruits

License: CC BY 4.0

44. Fruit Classification (Roboflow)

Description: 2,918 images labeled for fruit classification on white backgrounds.

Modality: Image

Domain: Classification

Link: https://public.roboflow.com/classification/fruits-dataset

License: Roboflow terms

45. Eating Sound (Fruits subset)

Description: 11,141 short WAV clips of eating sounds incl. fruits (apple bite, etc.).

Modality: Audio

Domain: Audio Classification

Link: https://www.kaggle.com/datasets/mashijie/eating-sound-collection

License: Public Domain (PDDL)

46. MetaFruit (Multi-fruit detection)

Description: 4,248 orchard images with 248,015 fruit instances (apple, orange, lemon, grapefruit, tangerine).

Modality: Image + BBoxes (JSON)

Domain: Harvesting/Detection

Link: https://www.kaggle.com/datasets/jinjial/meta-fruit

License: See page

47. FruitSeg30 (again link to masks)

Description: Pixel-wise masks per class for 30 fruits (paired to images).

Modality: Masks

Domain: Segmentation

Link: https://data.mendeley.com/datasets/vkht8pfsp3/3

License: CC BY 4.0

48. Hyperspectral Giessen Fruits/Vegetables

Description: HSI of 42 fruits/vegetables including interior/exterior spectral data.

Modality: Hyperspectral

Domain: Spectroscopy/Quality

Link: http://www.allpsych.uni-giessen.de/GHIFVD

License: Research (see site)

49. Fruits Fresh vs Rotten (Mendeley small)

Description: 1,500 images (strawberry, peach, pomegranate) labeled fresh vs rotten (+augmented).

Modality: Image

Domain: Quality Classification

Link: https://data.mendeley.com/datasets/hp4jyz2448/1

License: Apache-2.0

50. Citrus/Strawberry Time-lapse (derived)

Description: Time-lapse derived frames for citrus/strawberry in multiple growth stages (see papers).

Modality: Images from Videos

Domain: Growth/Ripeness

Link: https://zenodo.org/records/7224690

License: Open (see page)