

# EPIC Kitchens 100 Dataset

EPIC-Kitchens-100 is the largest dataset in first-person (egocentric) vision; itself an extension of the EPIC-Kitchens-55 dataset.

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## Citing

When using the dataset, kindly reference:

TBA

## Dataset Details

The EPIC-Kitchens-100 dataset is an extension of the EPIC-Kitchens-55 dataset. Videos are distinguished as follows:

- PXX\_YY.MP4 videos originate from EPIC-Kitchens-55.
- PXX\_1YY.MP4 videos originate from the extension collected for EPIC-Kitchens-100 (thus represent new videos).

The dataset currently has 6 active benchmarks:

- Action Recognition
- Weakly Supervised Action Recognition
- Action Detection
- Action Anticipation
- Unsupervised Domain Adaptation
- Action Retrieval

We provide csv files for the train/val/test sets of each benchmark detailed below for ease of use.

Ground truth is provided for action segments as action/verb/noun labels along with the start and end times of the segment.

## Quick Start

Here you can download the annotation files for all of the challenges. For more information on each challenge, please see the paper [here](#). Download scripts are provided for the videos, RGB Frames and Flow frames.

### Action Recognition Challenge

Download the Action Recognition train/val/test files.

## Weakly Supervised Action Recognition Challenge

This challenge uses the Action Recognition files, download the train/val/test files.

## Action Detection Challenge

This challenge uses the Action Recognition files, download the train/val/test files.

## Action Anticipation Challenge

This challenge uses the Action Recognition files, download the train/val/test files.

## Unsupervised Domain Adaptation Challenge

Download the Unsupervised Domain Adaptation source train/target train/target test files.

## Action Retrieval Challenge

Download the Action Retrieval train/test files.

## Important Files

We direct the reader to RDSF for the videos and RGB/Flow frames. For ease of use, download scripts are provided (see here for more details). We provide html and pdf alternatives to this README which are auto-generated.

- README.md (this file)
- README.pdf
- README.html
- license.txt
- EPIC\_100\_train.csv (info) (Pickle)
- EPIC\_100\_val.csv (info) (Pickle)
- EPIC\_100\_test.csv (info) (Pickle)

## Additional Files

- EPIC\_100\_UDA\_source\_train (info) (Pickle)
- EPIC\_100\_UDA\_target\_train (info) (Pickle)
- EPIC\_100\_UDA\_target\_test (info) (Pickle)
- EPIC\_100\_retrieval\_train (info) (Pickle)
- EPIC\_100\_retrieval\_test (info) (Pickle)

## File Structure

### EPIC\_\_100\_\_train.csv

This CSV file contains the action annotations for the training set and contains 15 columns:

| Column Name         | Type                       | Example      | Description   |
|---------------------|----------------------------|--------------|---|
| narration_id        | string                     | P01_01_0     | Unique ID for the segment which includes participant ID and video ID.         |
| participant_id      | int                        | P01          | ID of the participant (unique per participant).                               |
| video_id            | string                     | P01_01       | ID of the video where the segment originated from (unique per video).         |
| narration_timestamp | string                     | 00:00:01.089 | Timestamp of when the original narration was recorded in HH:mm:ss.SSS.        |
| start_timestamp     | string                     | 00:00:00.14  | Start time in HH:mm:ss.SSS of the action segment.                             |
| stop_timestamp      | string                     | 00:00:03.37  | End time in HH:mm:ss.SSS of the action segment.                               |
| start_frame         | int                        | 8            | Start frame of the action.  |
| stop_frame          | int                        | 202          | End frame of the action.  |
| narration           | string                     | open door    | Transcribed description of the English narration provided by the participant. |
| verb                | string                     | open         | Parsed verb from the narration.   |
| verb_class          | int                        | 3            | Numeric ID of the verb's class.   |
| noun                | string                     | door         | First parsed noun from the narration.   |
| noun_class          | int                        | 3            | Numeric ID of the first noun's class.   |
| all_nouns           | list of string (1 or more) | [door]       | List of all parsed nouns within the narration.                                |
| all_noun_classes    | list of int (1 or more)    | [3]          | Numeric ID of all of the parsed noun's classes.                               |

## Additional Information

### File Downloads

Due to the size of the dataset we provide scripts for downloading parts of the dataset:

- videos (GB)
- frames (GB)
  - rgb-frames (GB)
  - flow-frames (GB)

*Note: These scripts will work for Linux and Mac. For Windows users a bash installation should work.*

These scripts replicate the folder structure of the dataset release on RDSF, found [here](#).

If you wish to download part of the dataset instructions can be found [here](#).

### Differences to EPIC-Kitchen-100

Whilst videos from EPIC-Kitchens-55 are used within EPIC-Kitchens-100 some of the annotations have been modified to improve the quality of the annotations. Additionally, with EPIC-Kitchens-100, the verb/noun classes have been updated to cover the annotations from the new videos. Because of this, the annotations from EPIC-Kitchens-55 cannot be used for EPIC-Kitchens-100.

## License

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**Changelog**

Please see the release history for the changelog.