Global AI Hub - Deep Learning Bootcamp
Urban Sounds Classification Project

Preprocessing Notebook

CNN Model Notebook

Libraries: numpy, pandas, librosa, matplotlib, seaborn, openCV

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Urban Sounds Dataset

Spectrogram → Spectrogram Function

Includes   Includes

Preprocessing →

Preprocessing Dataset

CNN Model →

CNN Model & Output

Includes

Output →

Uploading Results to Github

Requires

Requires

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1. Generate spectrograms of audio files. For your convenience, the following you can use the function. to the create_spectrogram function, you read when you send the audio file, it will return you the prepared spectrogram.
2. Save the spectrograms you created in the folder of the class they belong to.

1. By reading the images (spectrograms) in order, grayscale transformation, resizing and normalize.
2. Save images with their tags in [image, tag] format and add to the list.
3. Using this list, you can view and create the X_train, y_train, X_val, y_val, X_test and y_test datasets.
4. Save these datasets to your computer.

1. Prepare a CNN model.
2. Train the model using the data you have prepared.
3. Print the model's performance metrics, loss and accuracy graphs on the screen.
4. Do hyperparameter optimization based on the results you get.

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