

✔ Congratulations! You passed!

Grade received 100% To pass 80% or higher

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Different Data Types

Total points 3

1. Visualizing an audio signal in the time domain usually reveals very little information on its spectral content. Which graphical representation displays the amplitude changes for each frequency as a function of time?

1 / 1 point

- ☐ Feature normalization
- ☒ Spectrogram.
- ☐ Short-Time Fourier Transform.
- ☐ librosa

✔ Correct

Spot on! Check this [page](#) for more information on spectrograms.

2. What would be a striking caveat or shortcoming of interpreting a video just as a series of images?

1 / 1 point

- ☒ Losing the semantic context coming from the sequence of events.
- ☐ Considering that all subsequent frames are correlated.
- ☐ Hindering classifier accuracy.
- ☐ Unnecessarily increasing the dimensionality of the dataset.

✔ Correct

Correct! Videos are time series as well and thus the ordering of events matter a great deal.

3. In the analysis of the weather time series data set you saw that the samples were acquired at a rate of 6 samples per hour. You also know that weather changes typically occur on a much slower time scale. What is a valid sampling strategy to make predictions into the future for this specific case?

1 / 1 point

- ☐ Use one sample at a time to make predictions.
- ☐ Upsampling by interpolation.
- ☒ Windowing and omitting samples.
- ☐ Omitting samples.

✔ Correct

Right on! Taking a finite window of data plus downsampling is the way to go for slow time varying signals.