**1.**

Question 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**



Short-Time Fourier Transform.



Feature normalization



Spectrogram.



librosa

**Correct**

Spot on! Check this [page](https://en.wikipedia.org/wiki/Spectrogram) for more information on spectrograms.

**2.**

Question 2

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

**1 / 1 point**



Considering that all subsequent frames are correlated.



Losing the semantic context coming from the sequence of events.



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.**

Question 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**



Omitting samples.



Upsampling by interpolation.



Windowing and omitting samples.



Use one sample at a time to make predictions.

**Correct**

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