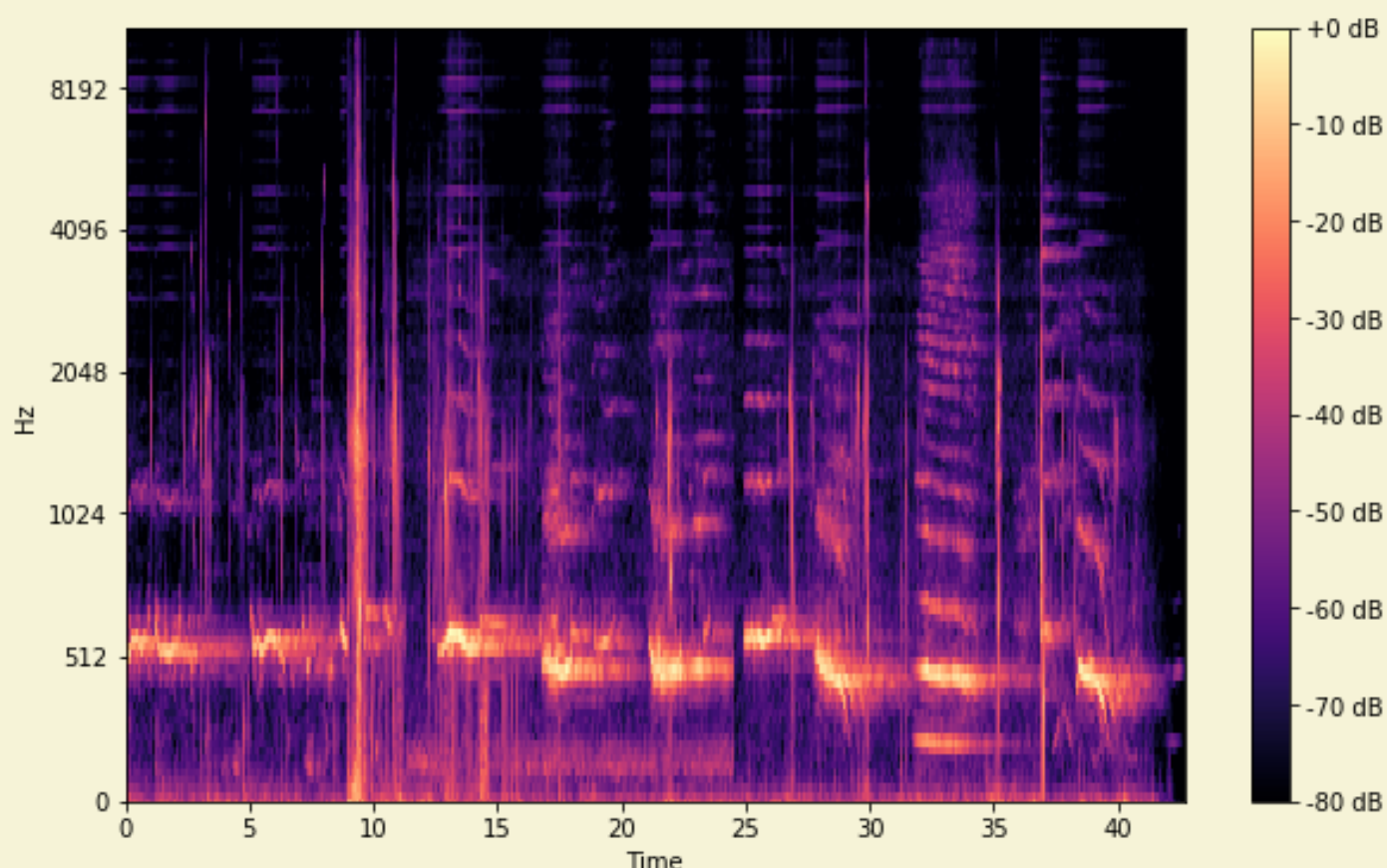


THESIS PROPOSAL

In sound processing, the mel-frequency cepstrum (MFC) is a representation of the short-term power spectrum of a sound, based on a linear cosine transform of a log power spectrum on a nonlinear mel scale of frequency.



TITLE Feature Uncertainty from Audio Noise

TOPIC There has been a lot of work regarding feature uncertainty for images. When working with audio, we often employ so-called mel spectrograms, which in turn can be visualized. In your thesis you will be using classical uncertainty approaches usually employed for images on mel spectrograms of audio

LITERATURE You will start off by revising literature on uncertainty quantification of images, such as

- <https://paperswithcode.com/paper/uncertainty-sets-for-image-classifiers-using>
- https://ieeexplore.ieee.org/abstract/document/1467384?casa_token=Wd-8ed36rQOAAAAA:Z3hAW9yZ2O9XKBKPZpkt1QqCOQvFFzz9K9ylznnuJxfT6Rkog5ythjgtLxBhwtyYVrY4RiOoPw

REQUIRED SKILLS

- Programming in python/ basic knowledge how to google together the use of different libraries
- ability to review and summarize literature

DATASETS

Example datasets include public audio datasets such as

- <https://research.google.com/audioset/>
- or choose one from: <https://towardsdatascience.com/40-open-source-audio-datasets-for-ml-59dc39d48f06>

RESULTS

