# DNN Status

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Status

- I've tried various fully connected networks (dense layer), but the result was not satisfying.

- It seems my networks are just detecting energy from the waveform.
    - They just classify high energy waveform as signal, and low energy waveform as background.

Plan - Energy Separation

- I'm going to challenge an easier problem - signal/background classification for high energy.

- I separated my data set into 5 energy ranges.

  - (0~1), (1~2), (2~3), (3~6), (6~10) keV

Plan - Data Augmentation

- Augmentation: data enlargement technique useful in image recognition.

- Never fails, mostly successes.
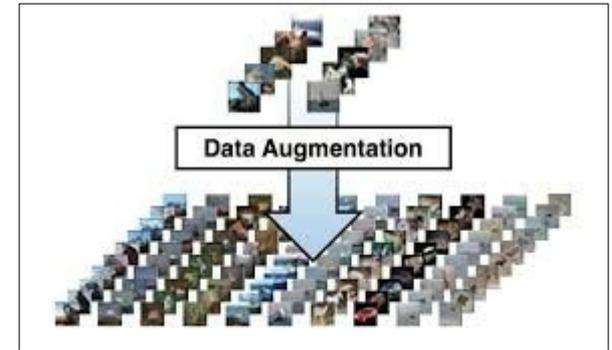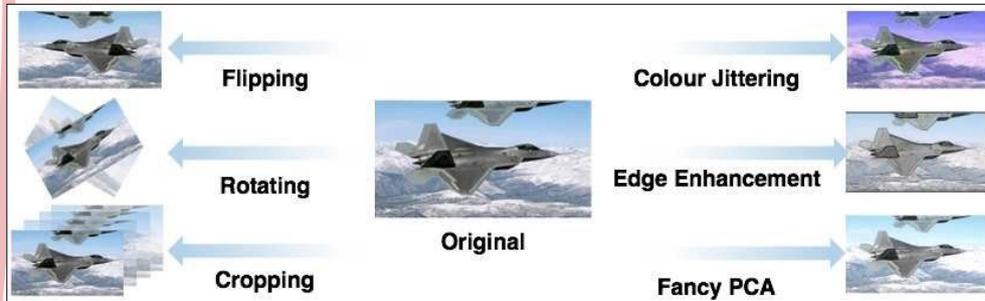
Plan - Data Augmentation

- I think our data can be augmented, too.
  - For example, we can crop the waveform.

Original Wave

Augmented Wave