

# Tones2Notes

This project aims to train a model that can generate musical notes (in MIDI format) of a given instrumental song. Music Generation involves generating music or music-like sounds from a model or algorithm. It is a challenging task as it involves audio preprocessing, converting instrumental music to vector representation, training models using deep learning techniques. The inspiration for this project is from OpenAI's MuseNet (<https://openai.com/research/musenet>)

Tech Stack:

1. We will primarily explore Deep learning techniques, RNN, CNN, LSTM
2. After this, we will try to evaluate model on different datasets, and compare results of other techniques given in <https://arxiv.org/pdf/1709.01620v4.pdf>
3. Python libraries: Librosa (for audio processing), TensorFlow and PyTorch

Datasets: Some useful datasets we found are MUSDB18, MAESTRO, NSynth, Music21

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