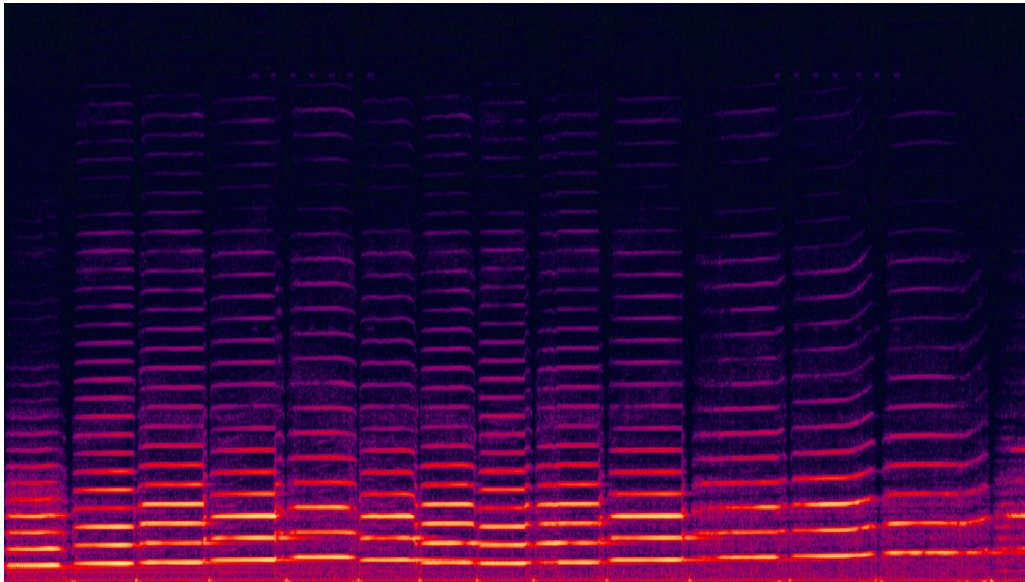**Practical ML.NET User Group**

Sound Classification using ML.Net

Praveen Raghuvanshi

@praveenraghuvan

Introduction

- Cloud Architect @ Harman, A Samsung Company

- Domain: Professional Audio, Video & Control

- Area of Expertise: Cloud, Distributed computing

- Area of Interest: AI/ML and IoT
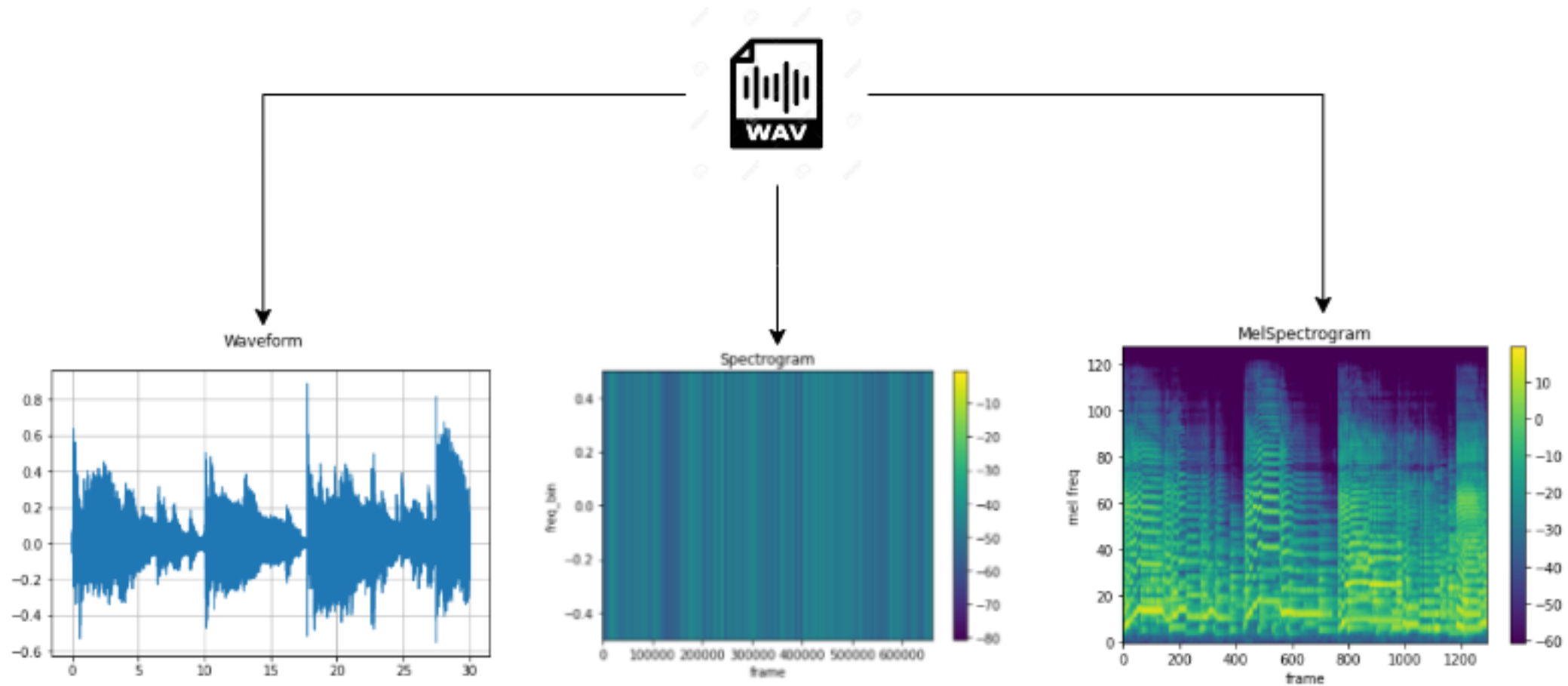
- Location: Bangalore, India

- Member: **.NET** foundation

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Agenda

- Basics of Sound
- Sound Classification
- Exploratory Data Analysis
- Framework and Tools
- Classification using ML.Net
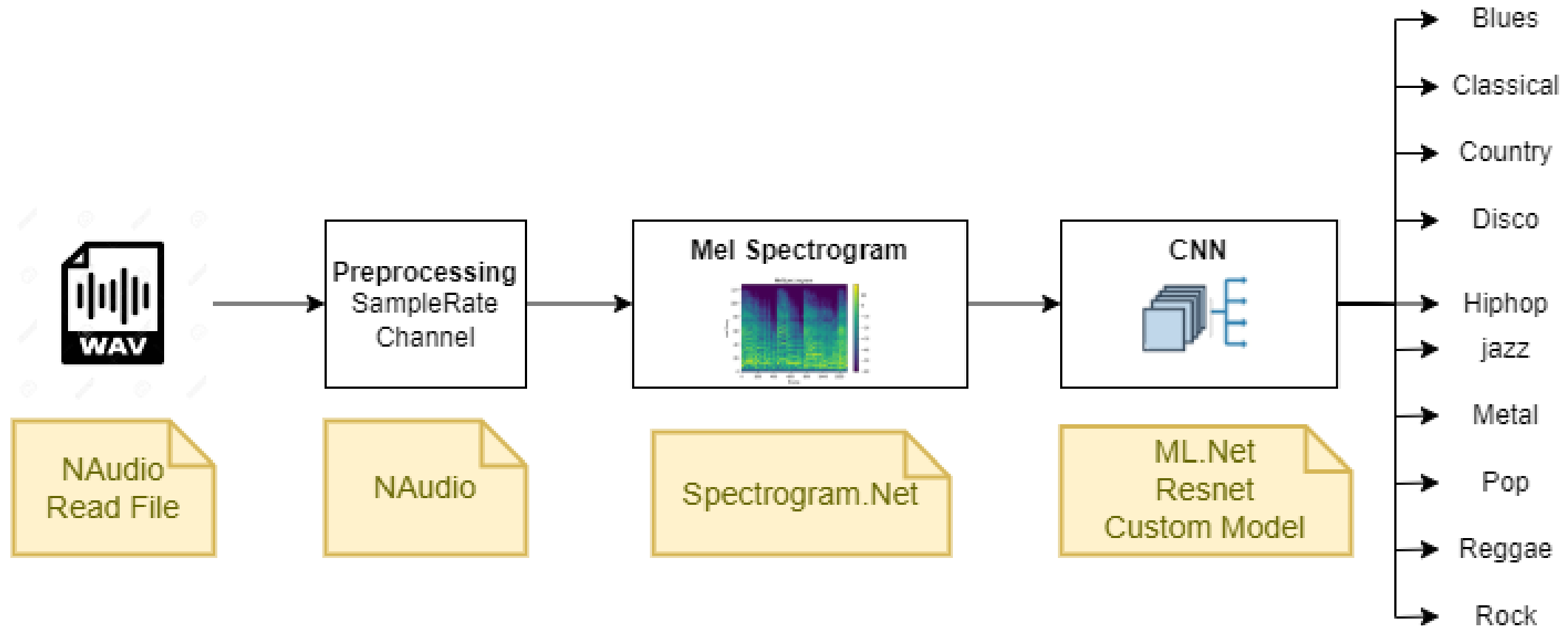- Demo

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Basics of Sound

- **Sound** : A pressure wave created by a vibrating object.

- **Amplitude** : Measure of height of a wave or loudness

- **Frequency** : Total # of waves produced per second. Human(20Hz – 20KHz)

- **SampleRate** : How many times per second a sound is sampled. 44.1KHz, 96KHz

- **BitRate** : Amount of data transferred into audio. 8-bit, 16-bit, 24-bit.

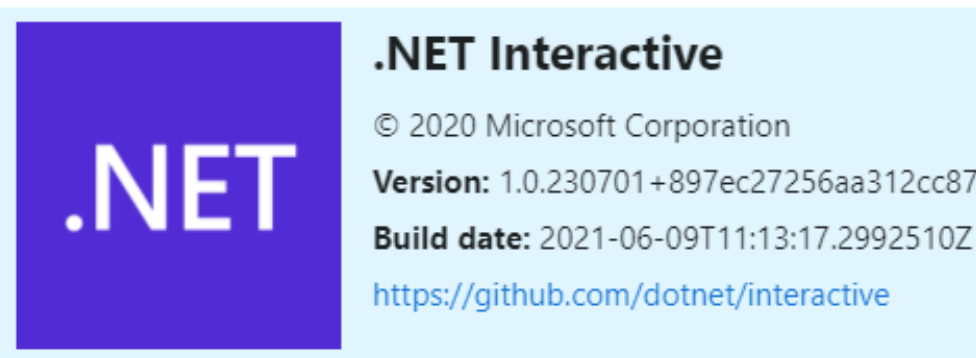- **Channels** : Represents spatial experience of sound. Mono/Stereo/Surround
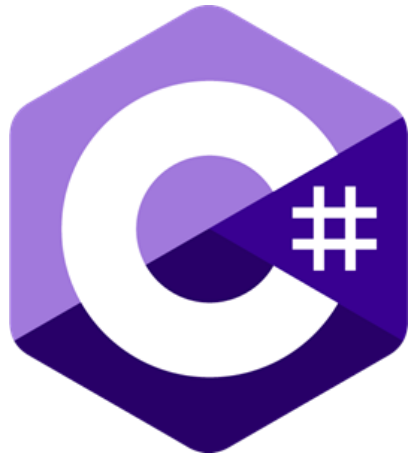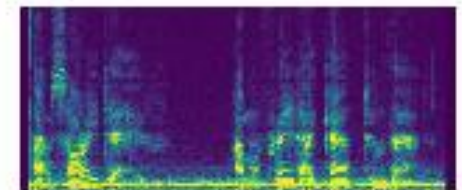
Visual Representation

Sound Classification

Blues

Classical

Country

Disco

Hiphop

jazz

Metal

Pop

Reggae

Rock

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Framework and Tools

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Demo

Resources

Github: https://github.com/praveenraghuvanshi/tech-sessions/tree/master/14042022-Practical-ML-Net-Sound-Classification

Short URL: https://bit.ly/3jDAe3O

Thank you

Q & A

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https://t.me/joinchat/IifUJQ_PuYT757Turx-nLg

https://bit.ly/3AJhLL9