SPEECH EMOTION RECOGNITION

Using Python to Identify User Sentiment

By Nicholas Wertz

Meta

Meet Your Data Scientist

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Agenda

Agenda

Business Problem

Dataset

Preparation Method

Modeling & Results

Proposals & Future Considerations

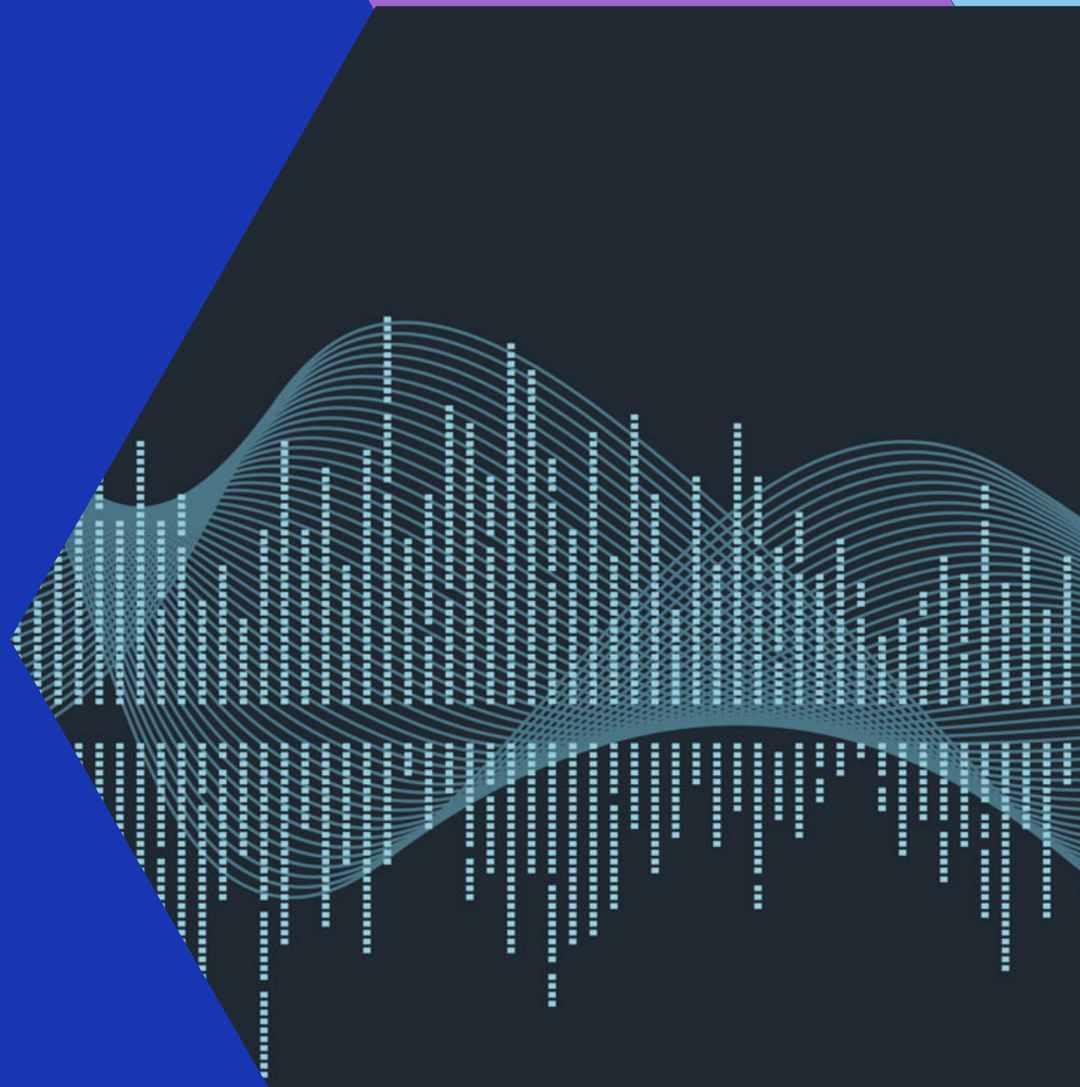
How Can We Engage Users?

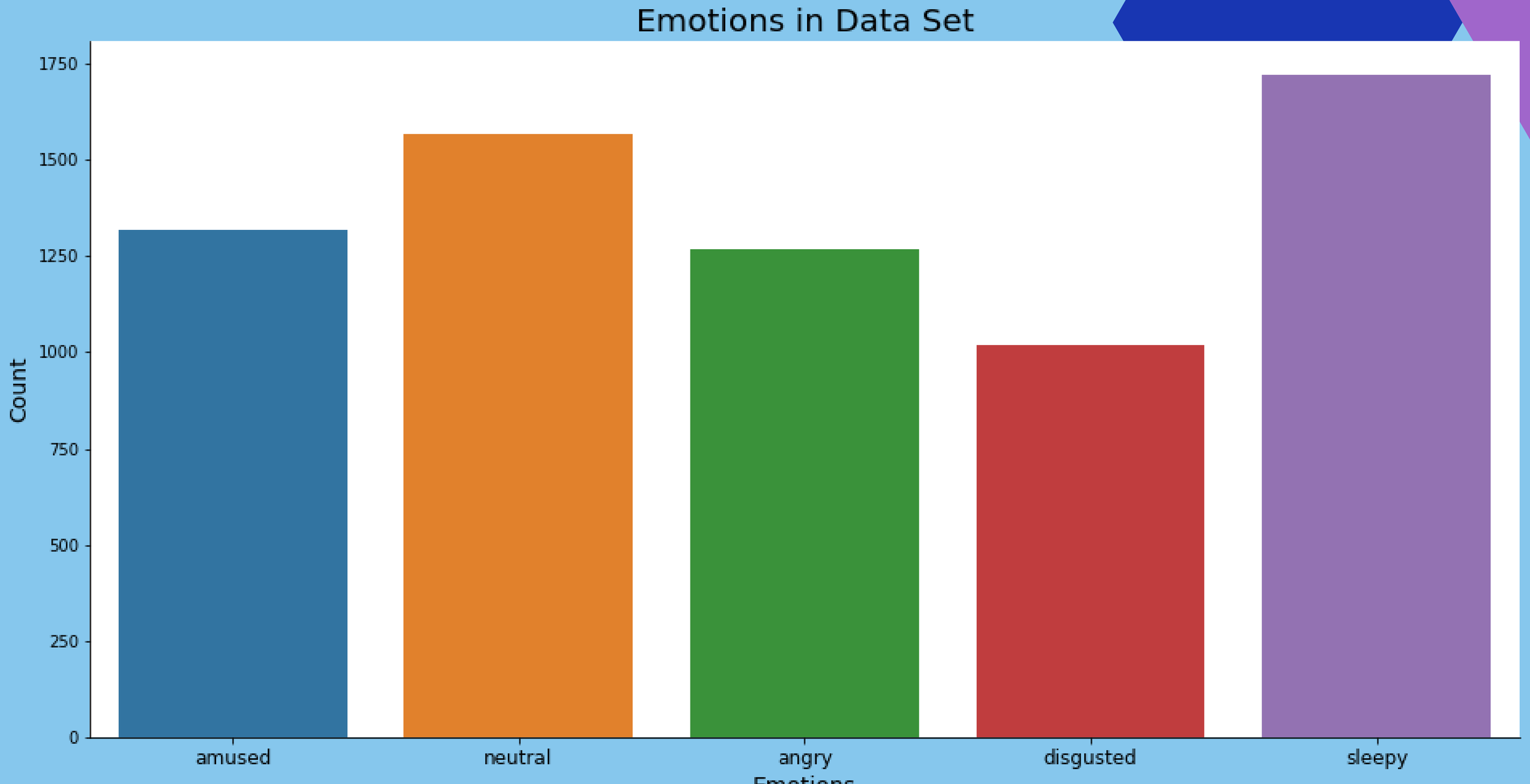
Track user's emotional state from their audio

THE DATA

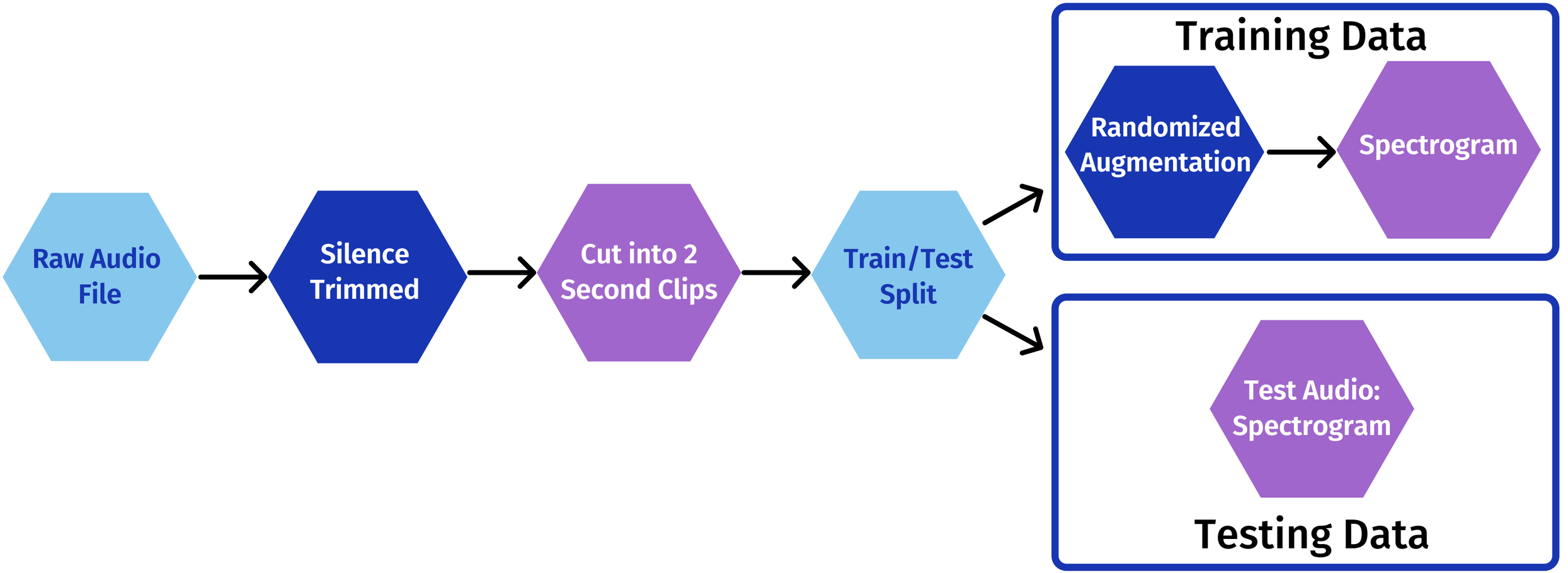
From the Emotional Voice Database

Nearly 6,900 voice recordings




Emotions in Data Set
Count
1750
1500
1250
1000
750
500
250
0
amused
neutral
angry
disgusted
sleepy

Data Preparation Method



MODELING

Using a Convolution Neural Network

Modeling & Results

Convolutional Neural Network

5 Emotional Classes

10 Cycles

74% Accuracy

Minimal Loss

Class Performance

Sleepiness F1 = 84%

Neutral F1 = 59%

PROPOSALS & FUTURE ACTIONS

Proposals

- Animate user avatar faces
- Target less satisfied users
- Special offers to keep users engaged for longer

Future Actions

- Update with User Audio
- More Accents
- More Languages

THANK YOU!

ANY QUESTIONS?

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