

SPEECH EMOTION RECOGNITION

Using Python to Identify User Sentiment

By Nicholas Wertz



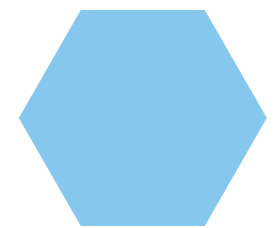
Meet Your Data Scientist

NICHOLAS WERTZ

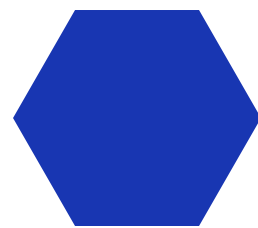
Flatiron School Alumnus



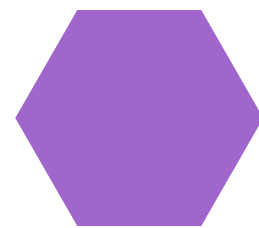
Agenda



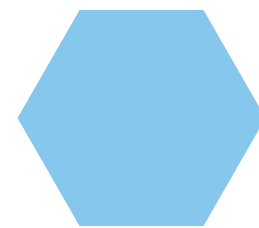
Agenda



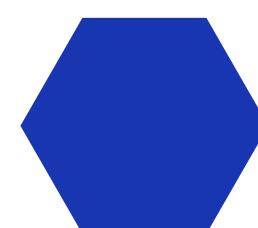
**Business
Problem**



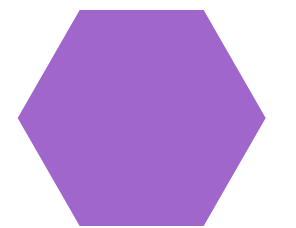
Data



Methods



**Modeling &
Results**



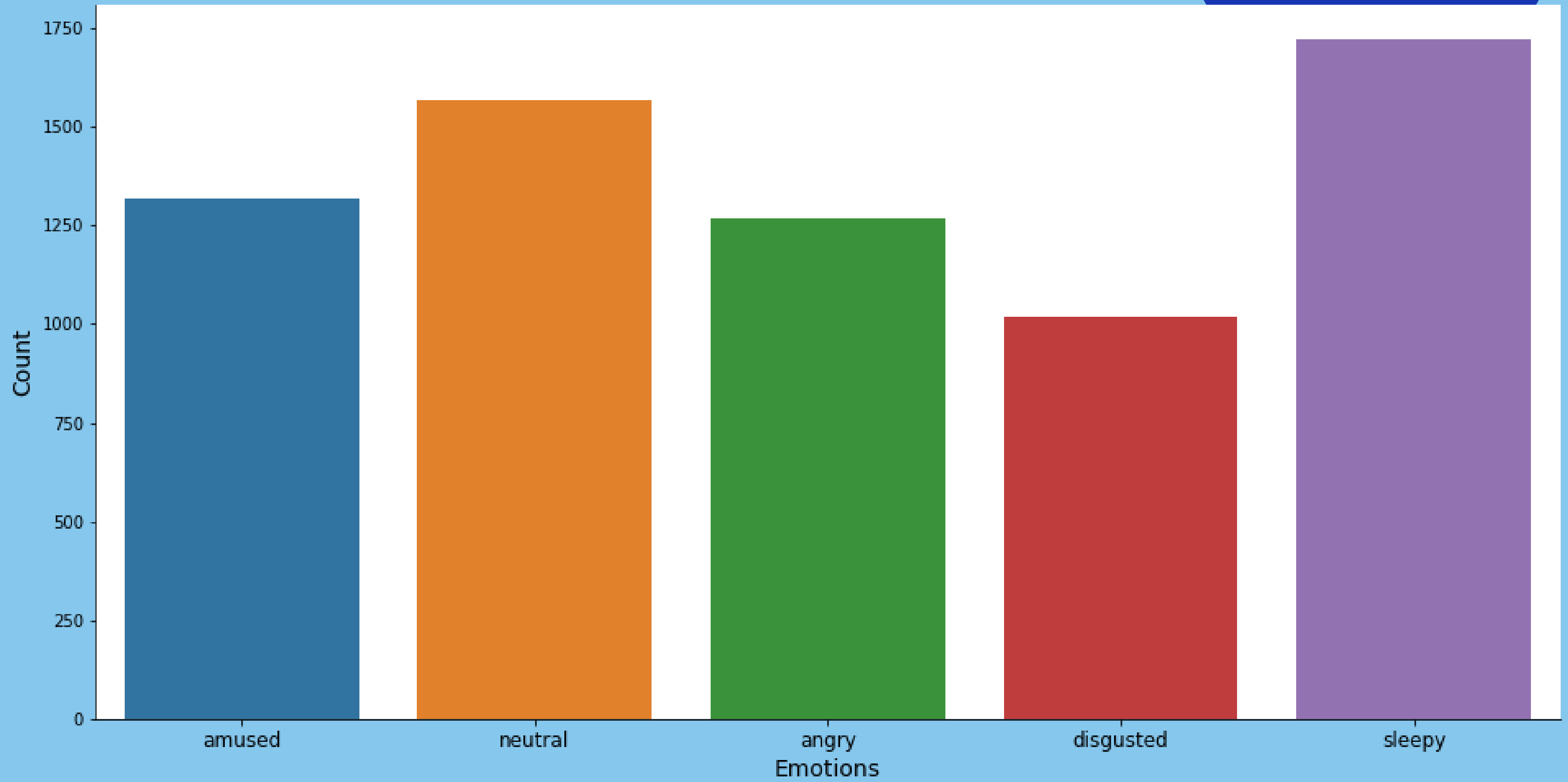
**Proposals
& Future
Considerations**

How Can We Engage Users?

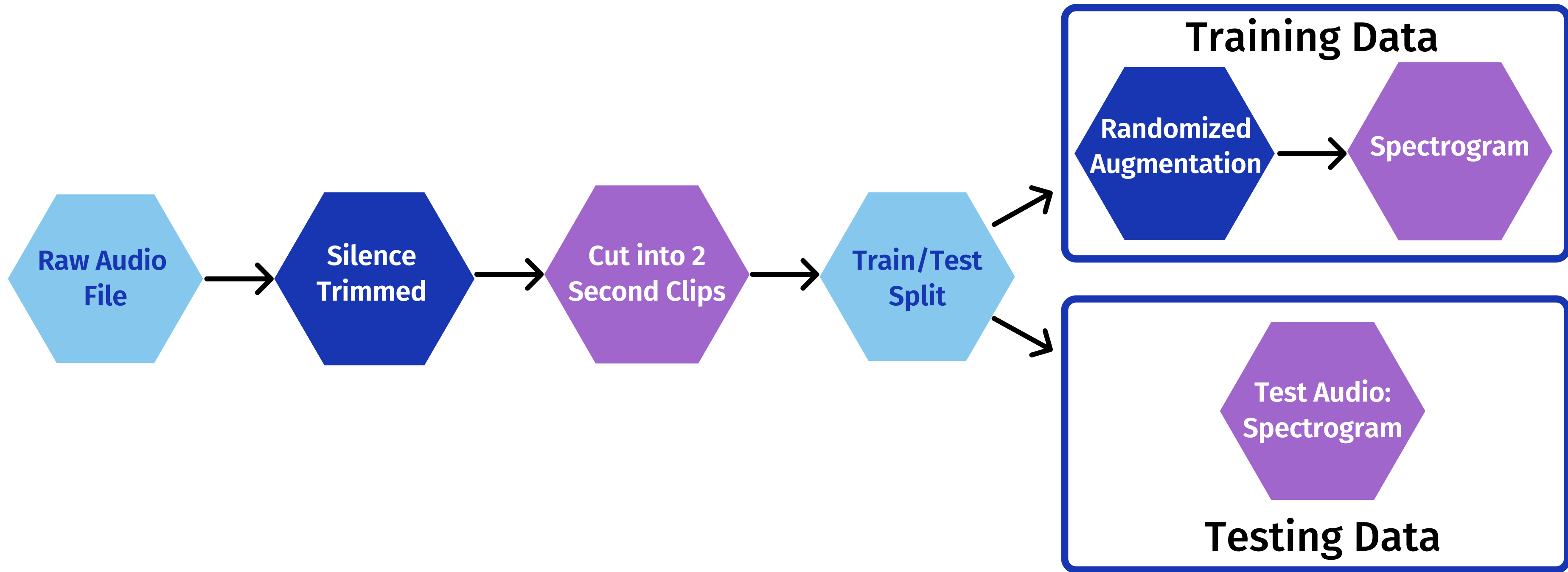
Track user's
emotional state from
their audio

Data Understanding

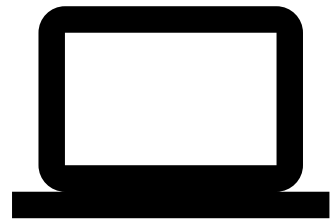
Emotions in Data Set



Data Preparation Method



Modeling & Results



Convolutional
Neural Network

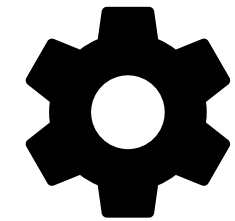
5 Emotional Classes

10 Epochs



74% Accuracy

Loss of 0.7696



Class Performance

Sleepiness F1 = 84%

Neutral F1 = 59%

Recommendations

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





Future Considerations

- Update with User Audio
- More Accents
- More Languages



THANK YOU!

ANY

QUESTIONS?

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