

EMOTION RECOGNITION IN HORIZON WORDS

Using Python to Identify User Sentiment

By Nicholas Wertz



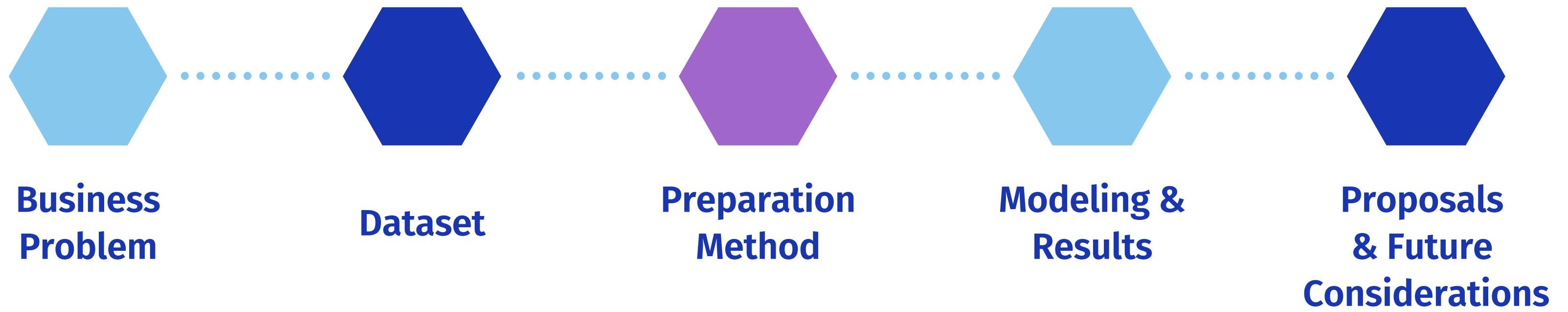
Meet Your Data Scientist

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Agenda



A woman with dark, curly hair is wearing a VR headset and looking down at her hands, which are raised in front of her face. She appears to be in a virtual environment. The background is a gradient of purple and blue.

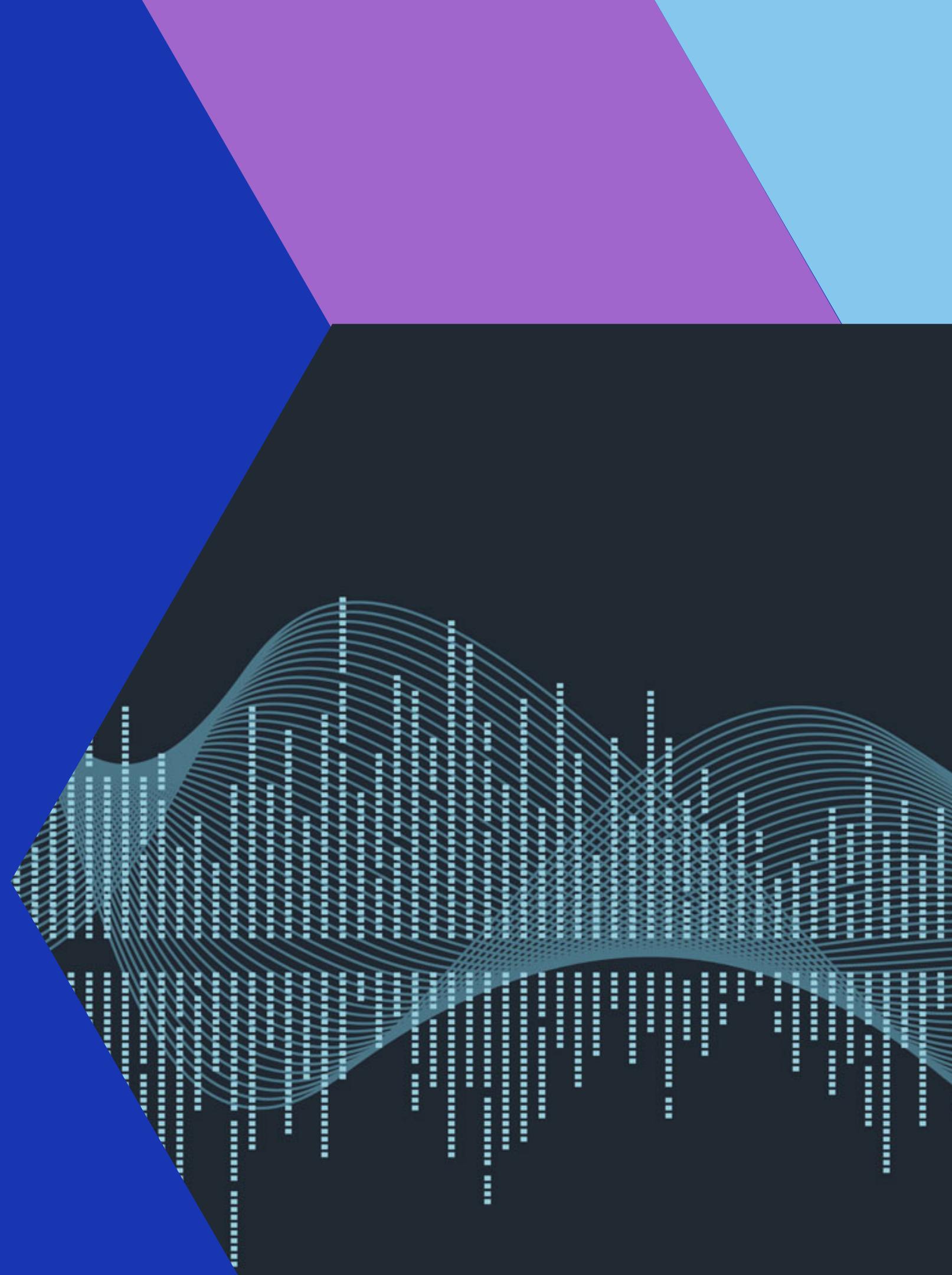
**HOW CAN WE
ENGAGE USERS
WITH HORIZON
WORLDS?**

How Can We Engage Users with Horizon Worlds?

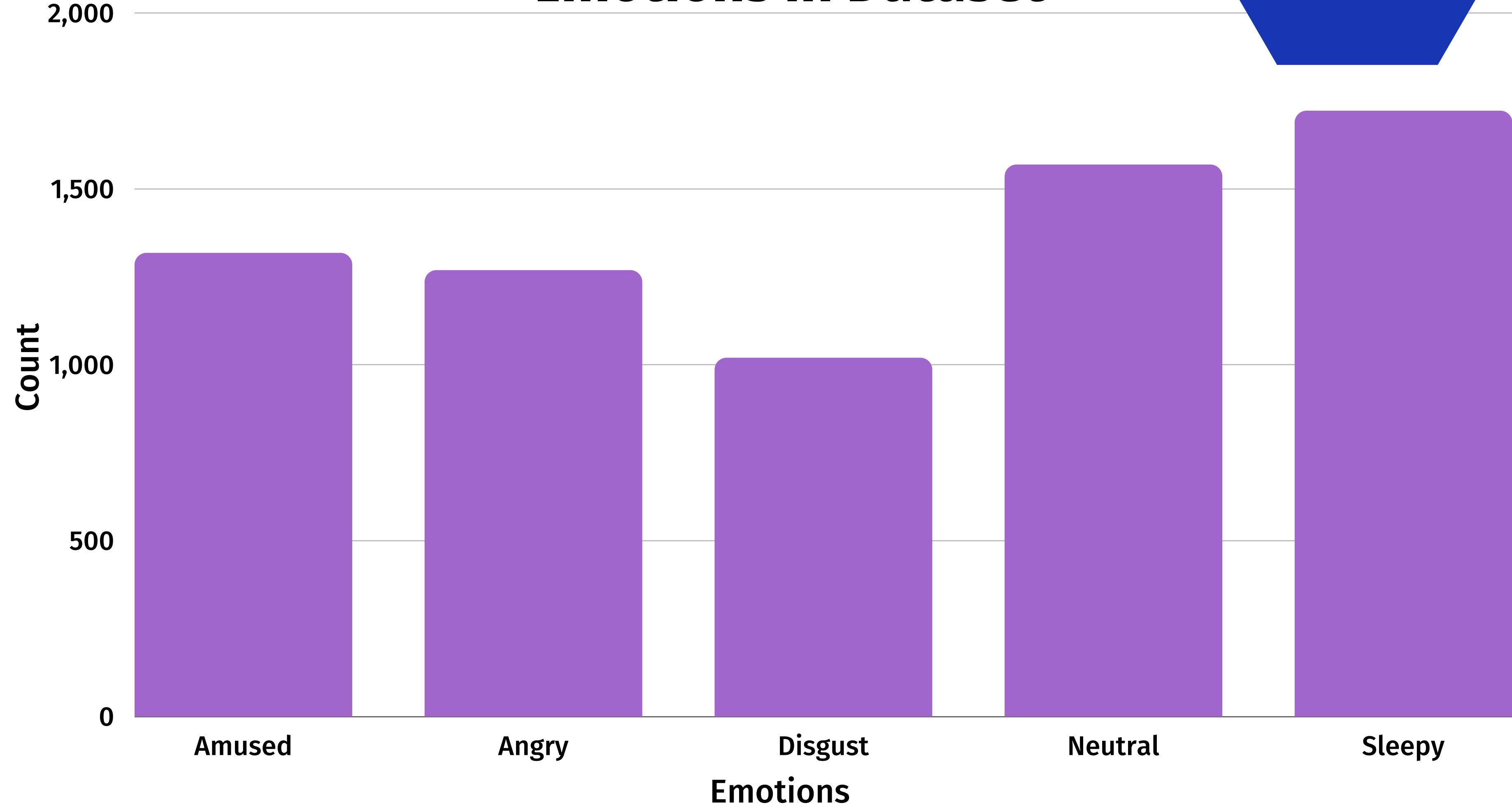
Track user's
emotional states from
their audio

THE DATA

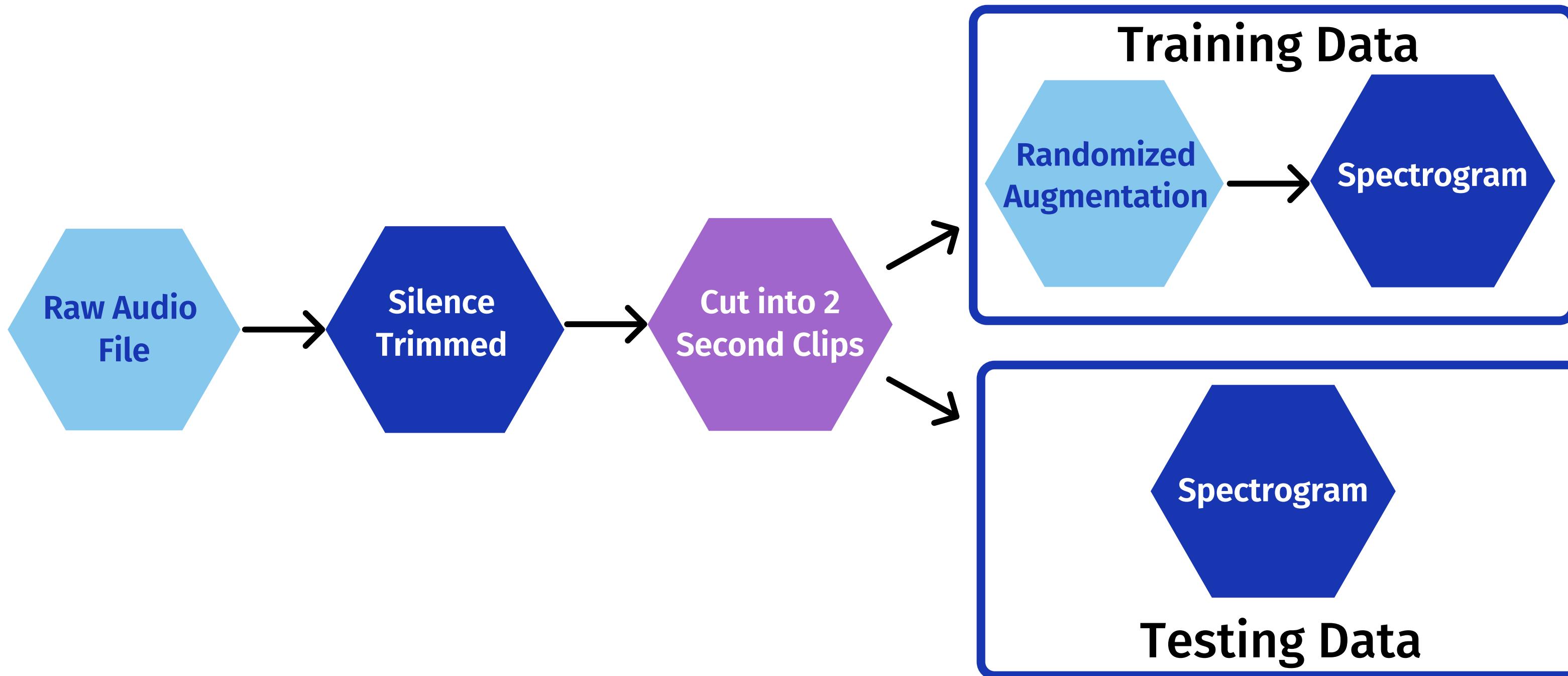
- From the Emotional Voice Database
- 4 English Speakers
- Mid-Atlantic Accents
- Nearly 6,900 Base Recordings



Emotions in Dataset



Data Preparation Method



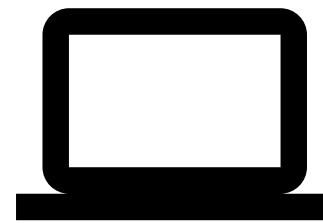
16,800 Spectrograms

MODELING

Using a Convolution
Neural Network



Modeling & Results



**Convolutional
Neural Network**

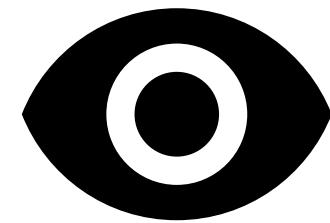
5 Emotional Classes

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



Nicholas Wertz

Data Scientist - Flatiron School



THANK YOU!
ANY
QUESTIONS?