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CAPSTONE: Lightning Talks

GA DSIR-1019

Idea 1:

User listening preferences on Spotify.

Based on a training set of playlists and their metadata (accessed via Spotify's API, and using the Spotipy Python library), I'll create a model that classifies the listening preferences of users based on their favorited songs or playlists they've followed or created. Gatherable metrics include:

- Energy
- Liveness
- Instrumentalness
- Acousticness
- Valence
- Tempo
- Duration
- Loudness
- Danceability
- Speechiness

Idea 2:

Liverpool, English Soccer, and COVID

I'll build a predictive model, based on the two seasons preceding COVID, the season split in half by COVID, and the current season that started during COVID, to analyze the effect of fans in the stadium and the condensed schedule on team/player performance.

- Impact of not having fans in the stadium
    - Score lines
    - Player performance

        - Goals per game
- Impact of clustered schedule
    - Injuries
    - Unavailable players/players resting after international tournaments
        - Champions League
        - International play
        - Europa League

Idea 3:

Implement a classification model using NLP to determine the veracity of news media.

Based on a pre-classified set of news data I'll build a classification model using NLP to determine whether a news story is fake or real, and alert end users as to the reliability of the source they're reading.

Idea 4:

Analyze and process song lyrics using NLP, and then allow listeners to search based on sentiment, lyrical content, topic, etc.
Predict genre based on lyrical content?
Compare lyrics of Billboard top 25 most popular songs every year from 1960-present?

- How has popular language changed over the years

DATA:

- Pulling lyrics from Google?
- Are there any lyric archives?

Idea 5:

I want to build something that makes people more at ease in a new environment while learning the skills or information necessary to succeed in that environment. More than anything, I want to make something that makes people kinder to each other, more compassionate, and positively communicative in an educational, workplace, et al. environment.

WHAT I HAVE TO DO

- Build a classification model to accurately predict personality types and pair them with corresponding teaching, training, et al. tests.
    - Potential assets
        - Dr. Condon, PhD
        - Dr. Vieira, MD
    - Potential blockers
        - Access to data
        - Ethics of asking students, hires, etc. to take these tests
            - They'd have to be optional: individuals could skip straight to choosing their preferred method of study.
            - Data would have to be blind, no names, no identifiers, not age, gender, or anything else that would enable discrimination by class.
- Build games/modules that interact with the user based on personality characteristics.
    - Aesthetics are very important to me!
    - There has to be a tangible reward
    - Positive reinforcement; growth mindset
    - Games/modules must be the same at the core level, but have a tone tailored to the individual's personality
        - Conversely (and more difficult), games and modules can take different forms for different users. Same info being taught, but some are funny/silly, others are straightforward and informational, others are very hands on/visual.
        - On this note, and super way more difficult, elements of each could be combined to optimize for the individual.
    - Opportunities for intraorganizational social interaction

DATA

- Psychologically endorsed personality test scale and results