



## Cannabis Data Science #71

June 22<sup>nd</sup>, 2022



*"I believe my parents live forever in  
the code they bequeathed to me, and  
I am never lonely."*

– Fictitious Quote

# Scientific Process

- 1 **Hypothesis**
- 2 Literature Review
- 3 Methodology
- 4 Data
- 5 Results
- 6 Conclusion

# 1. Hypothesis

**Hypothesis** - A cannabis consumer's personality affects the chemotype of cannabis that the consumer consumes on average.

## 2. Literature Review

### Economics

- **Revealed Preferences** - A theory that preferences of consumers can be revealed by their purchasing habits.

### Psychology

- The Big 5 Personality Traits
  - ▶ **O**penness
  - ▶ **C**onscientiousness
  - ▶ **E**xtraversion
  - ▶ **A**greeableness
  - ▶ **N**euroticism

### 3. Methodology - Ordinary Least Squares

Estimate the relationship between the Big 5 personality traits and the  $\beta$ -pinene to *D*-limonene ratio. Test

$$r_i = \beta_0 + \beta_o O_i + \beta_c C_i + \beta_e E_i + \beta_a A_i + \beta_n N_i,$$

where

- $r_i$  is the average  $\beta$ -pinene to *D*-limonene for user  $i$ ;
- $O_i, C_i, E_i, A_i, N_i$  are the predicted personality traits for user  $i$  on a scale of 0 to 1.

## 4. Data - Natural Language Processing to Predict Personality Traits

**Collected data** - Consumer purchases merged with lab results.

**Synthetic data** - Attempt to detect the Big 5 personality traits with natural language processing (NLP).

- The idea is that the user reveals their personality with the language that they choose to use.
- A scale of 0 to 1 will be used for each trait.

The **lexical hypothesis** asserts

- 1 Personality traits that are important to a group of people will eventually become a part of that group's language;
- 2 Important personality traits are likely to be encoded into a single word.

## 5. Results, conclusions, and future research

### **Advanced Cannabis Analytics**

Thursday, June 30<sup>th</sup>, 2022

4:20pm EST | 1:20 PM PST





Thank you for coming.

### Insights of the Day

- The words that you write are powerful.

What is on your mind for next week?