Geographic Determinants of Coffee Evaluation Scores

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Our Motivation!



Beyu Blue - Sophia



Allen Building- Shreyan



Bella Union - Jeffrey



Saladelia - Emma

Introducing Our Topic

Explored factors that impact a coffee bean's flavor

- Origin
- Bean type

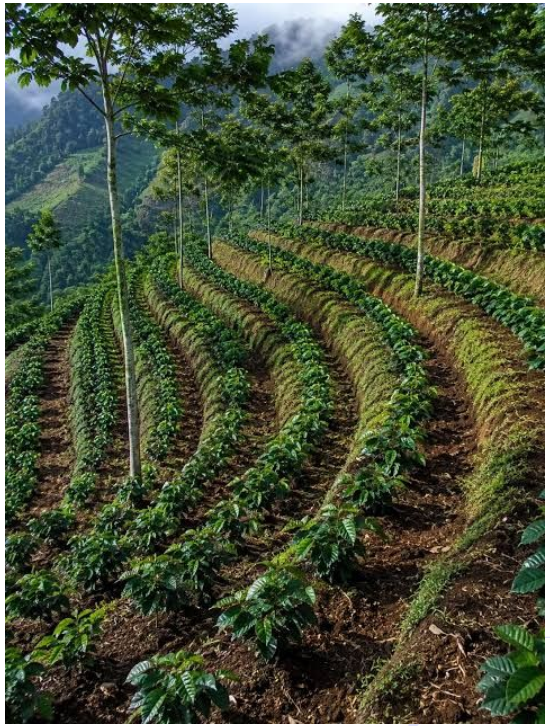
Hypothesized that South American coffee scores dominate

- Tropical environment
- Near equator

Objectives:

- Minimize potential selection bias
- Analyze variability, patterns, and outliers in data





What's in our coffee dataset?

Coffee Quality Institute (CQI) evaluations of coffee samples

Country of Origin

- Grouped into continents for geographic comparisons
  - Africa, Asia, North America, Oceania, South America



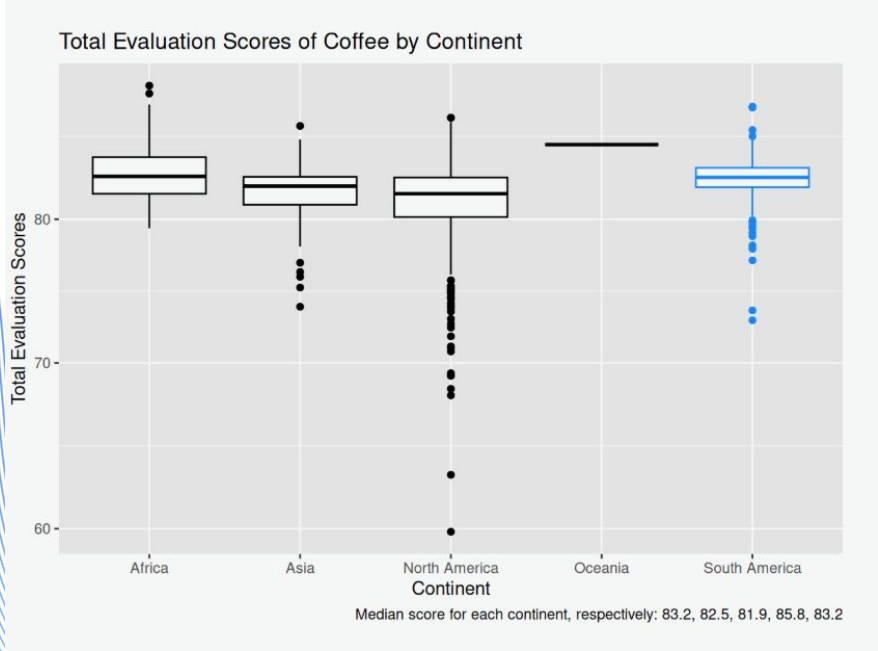
9 Sensory Measures

- Aroma
- Aftertaste
- Acidity
- Body
- Uniformity
- Flavor
- Balance
- Sweetness

Total Score

- The overall evaluation score of each coffee sample
  - Compared across continents

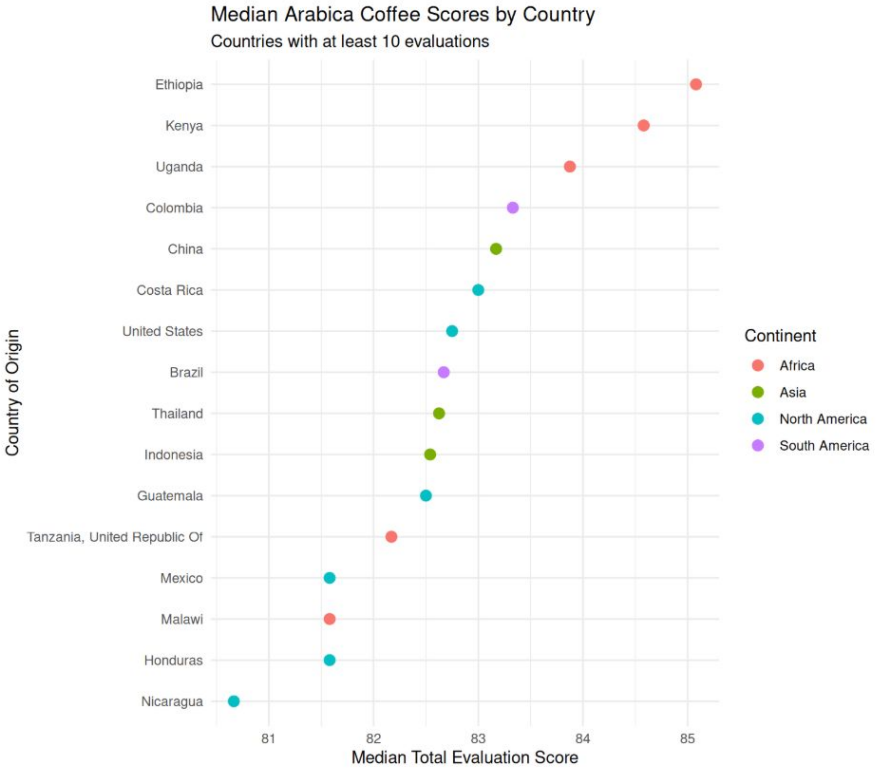
Exploratory Data Analysis



- Median coffee scores are closely grouped, ranging from **81.9 in North America** to **85.8 in Oceania**.
- South America's coffee scores appear average compared with other continents.
- Oceania's singular sample size explains its nonexistent interquartile range (IQR).
- North America has the most outliers, with some scores as low as **around 60**.



Exploratory Data Analysis



Median Arabica coffee evaluation scores by country for countries with at least 10 observations.



- The top three countries with the highest taste scores are in **Africa**.
- **Colombia** ranks fourth, representing South America.
- Africa has one of the highest median ratings across continents, suggesting that it produces the best-tasting coffee in this dataset.
- African countries appear **five times** in the top 16, while South American countries appear **twice**.

Discussion

Implications

- Boxplot:
  - Oceania only had one value
  - U.S. had a much larger range
- Scatterplot:
  - Weak correlation between geographic origin and coffee evaluation score based on median for both countries & continents

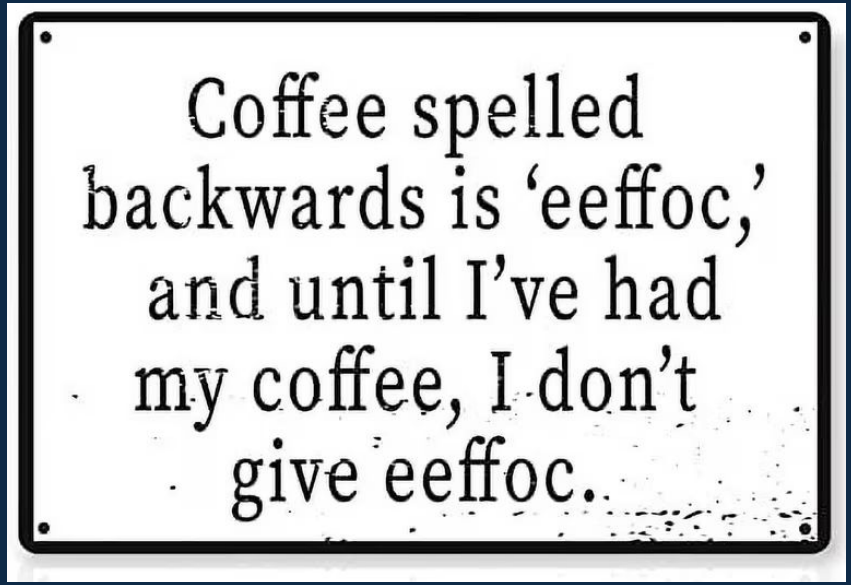


Conclusion for future analysis.



- South America didn't have the highest observed median score for continents
- Greater coffee evaluation scores associated with countries in Africa, though median scores were relatively similar across different continents
- Explore how climate and elevation affects individual scores
- Compare different countries within a continent at a time

Thank You!


Coffee spelled
backwards is 'eeffoc,'
and until I've had
my coffee, I don't
give eeffoc.