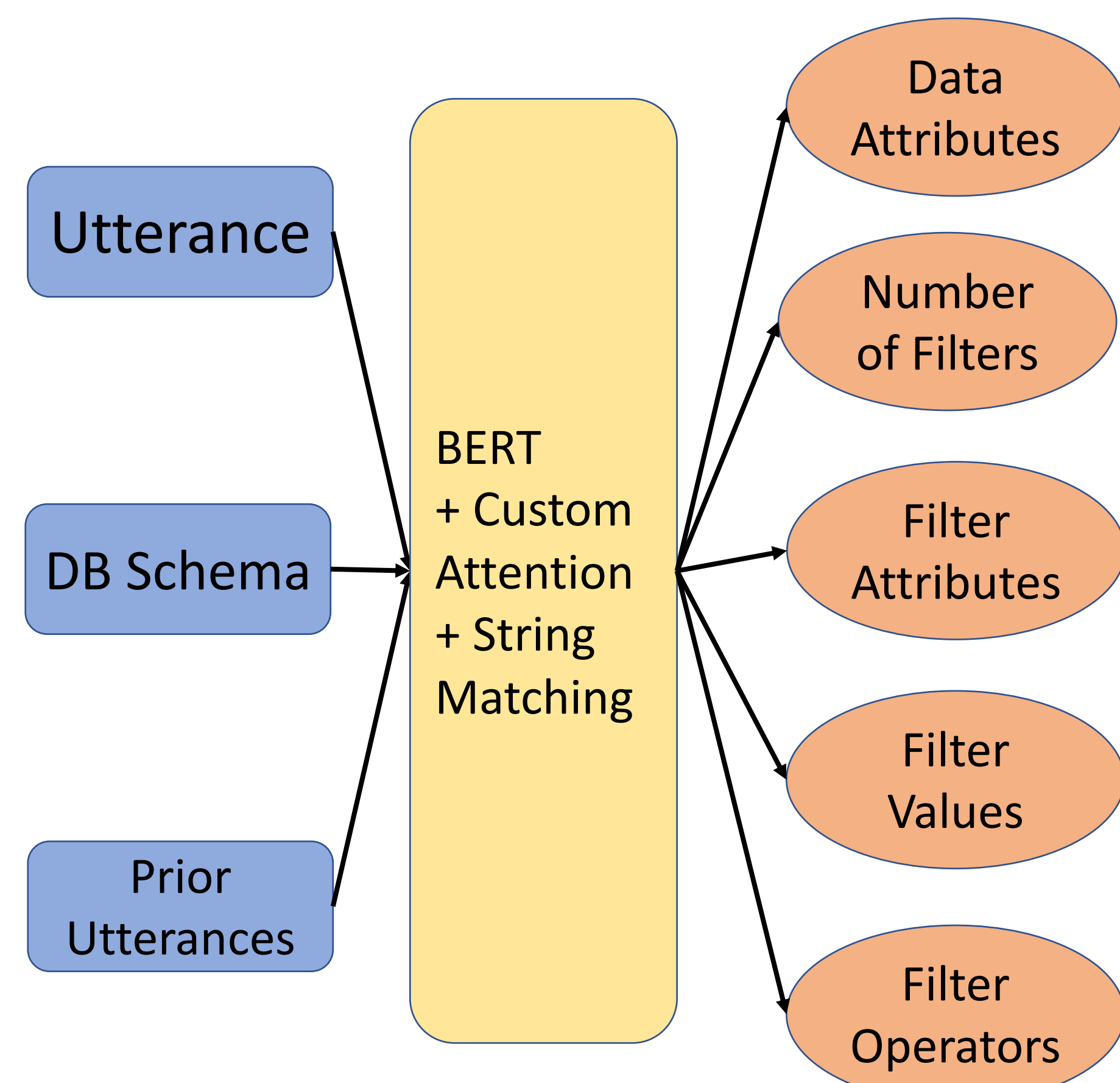


## Inferring Visualization Intent from Conversation

**BACKGROUND:** A key step of exploratory data analysis (EDA) is visualization generation. As more people without technical backgrounds become interested in EDA and generating visualizations, we will need a no-code tool to solve their needs.

### Key Concepts:

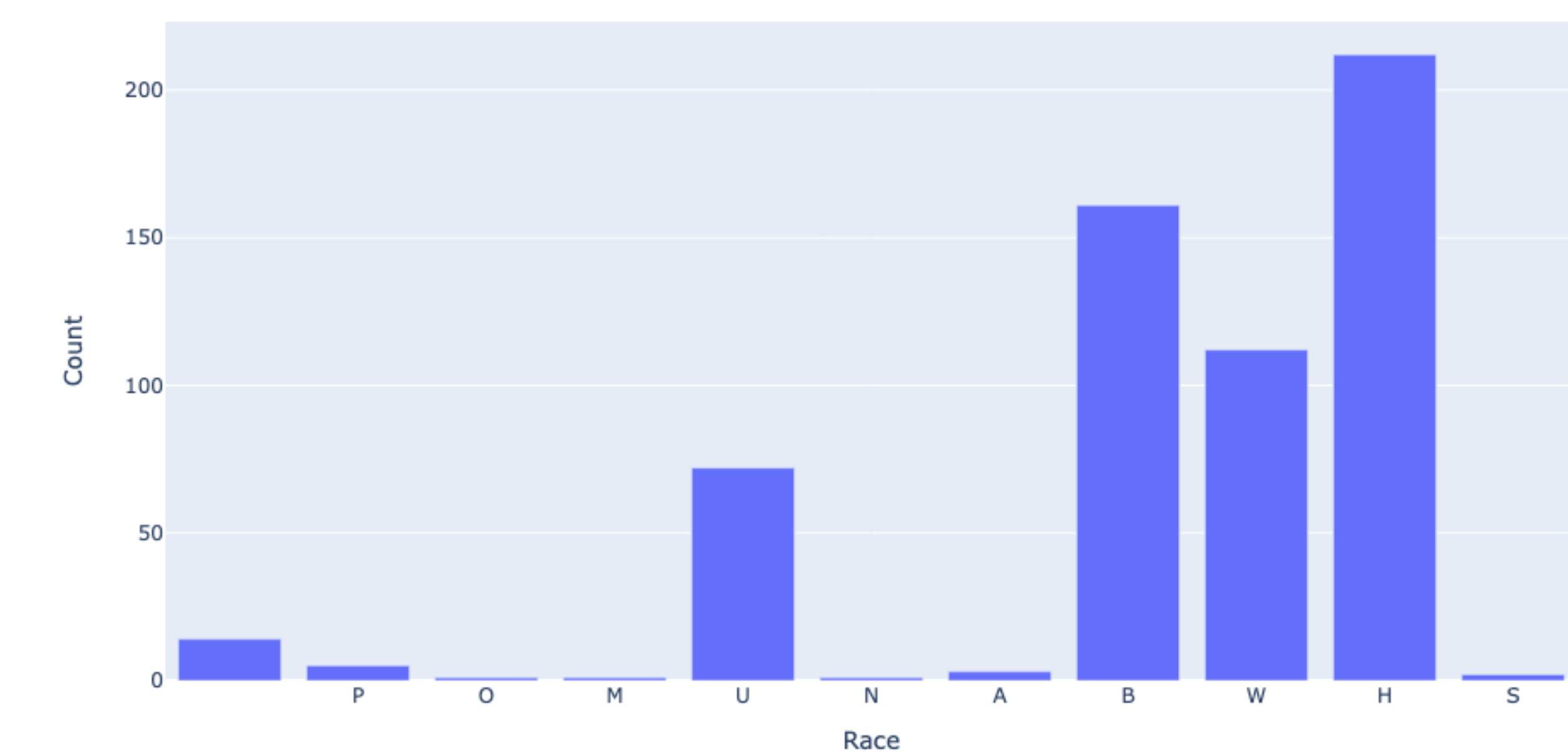
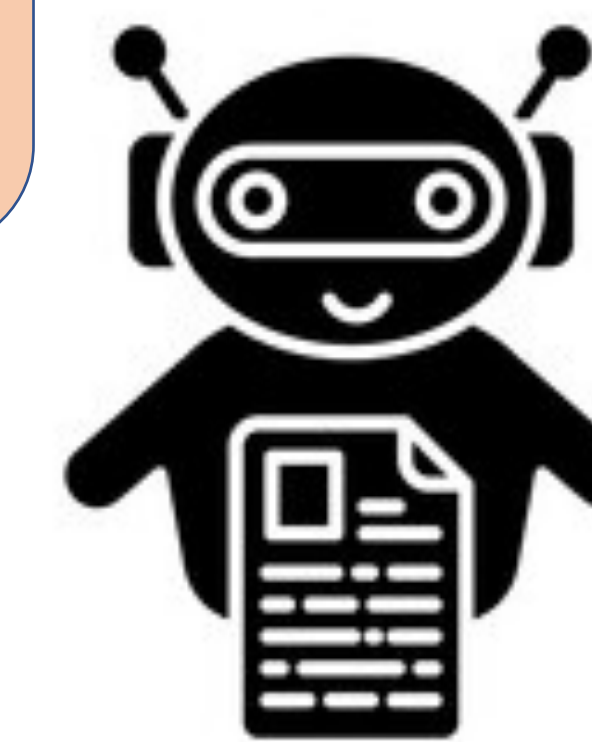
1. EDA can be viewed as a **conversation**.
2. No-code visualizations consist of **visualization intent** and encoding. We use this to build **machine learning models**.
3. Existing natural language to SQL datasets can be extended to create **natural language to visualization datasets**.
4. Each part of the visualization intent can be predicted with a **Large Language Model (BERT)** with **fine-tuning**.



# Natural language conversations are predictive of visualization intent.

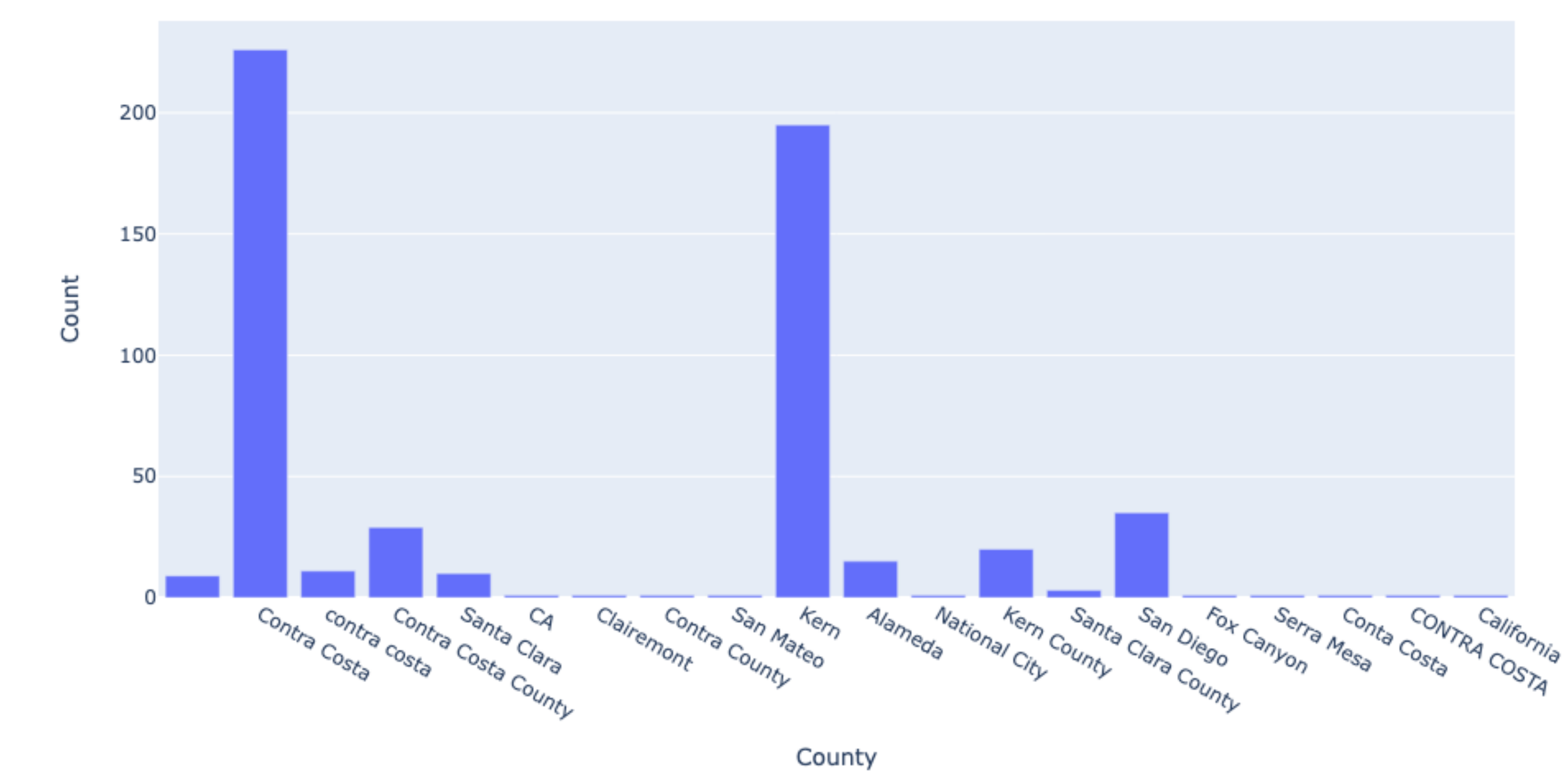
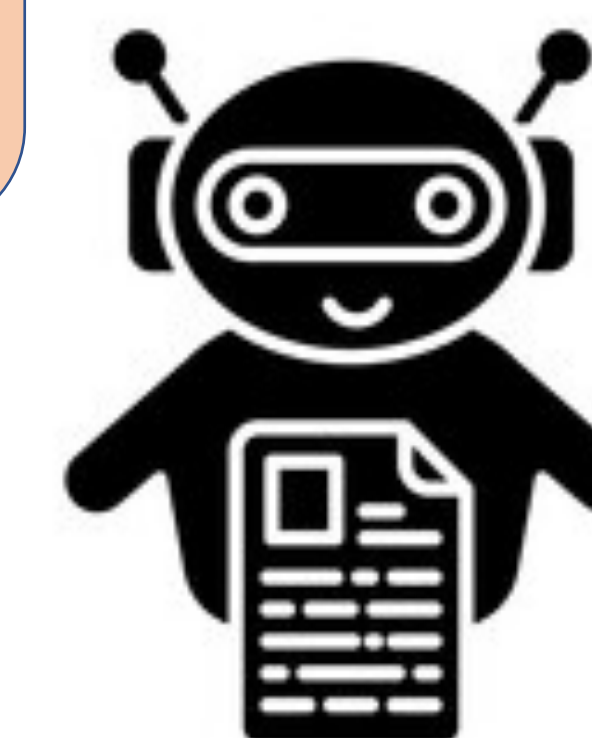
What are the demographics of traffic stop subjects?

**Intent**  
Attribute: Race  
Filter:  
Incident type = 'Traffic Stop'



What is the distribution of areas where subjects are stopped?

**Intent**  
Attribute: Country  
Filter:  
Incident type = 'Traffic Stop'



Are facts being disputed when non-lethal force occurred?

**Intent**  
Attribute: Facts Disputed  
Filters:  
Incident type = 'Traffic Stop'  
Type of Force = 'Non-lethal'

