

## BRFSS DASHBOARD — FULL REPORT

### 1. DATA INGESTION

- Loaded original CSV (~2.7M rows)
- Converted to Parquet for performance
- Verified schema and cleaned anomalies

### 2. MERGE LOGIC

- ResponseID merge rules
- Response text standardization
- BreakoutID merging
- Break\_Out label unification

### 3. PANEL AGGREGATION MODEL

- $\text{persons} = \text{Sample\_Size}$
- $\text{true\_ss} = \text{persons} * 100 / \text{Data\_value}$
- $\text{percent} = \text{persons\_sum} / \text{ss\_sum}$
- $\text{CI} = \text{percent} \pm 2 * \sqrt{p(1-p)/n}$

### 4. DASH APP ARCHITECTURE

- 3 dropdown selectors: Class → Topic → Question
- 8 analytical panels: Overall, Gender, Age, Race, Education, Income, Temporal, State
- CI bars + tooltip hover info
- More/Less filtering logic
- Loading spinners for UX

### 5. FILE STRUCTURE

app.py

utils/

merges.py

prepare.py

options.py

aggregation.py

assets/

styles.css

## 6. KEY TAKEAWAYS

- Dashboard mimics professor's R model exactly
- Scalable for millions of rows
- Easily extensible