

# Dietary trends among children across financial classes

Data: 1999 - 2011

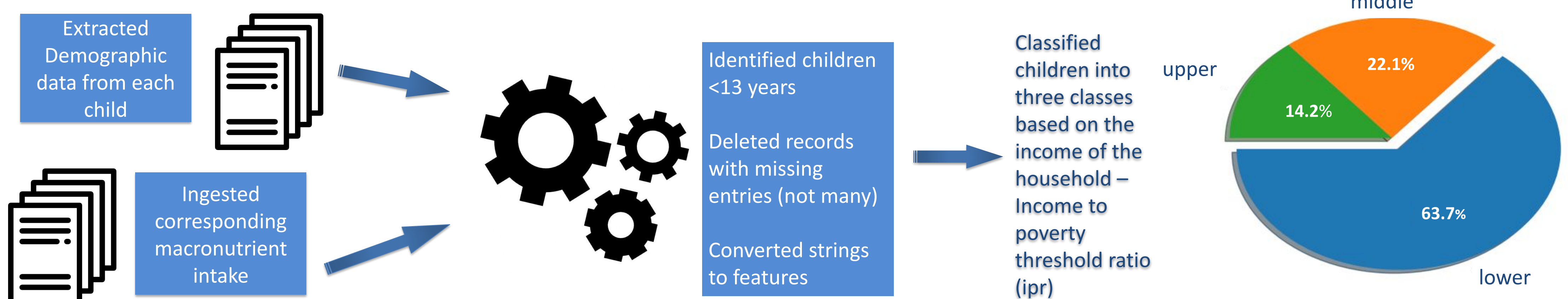
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Project: March, 2018

## Incidence of Diabetes



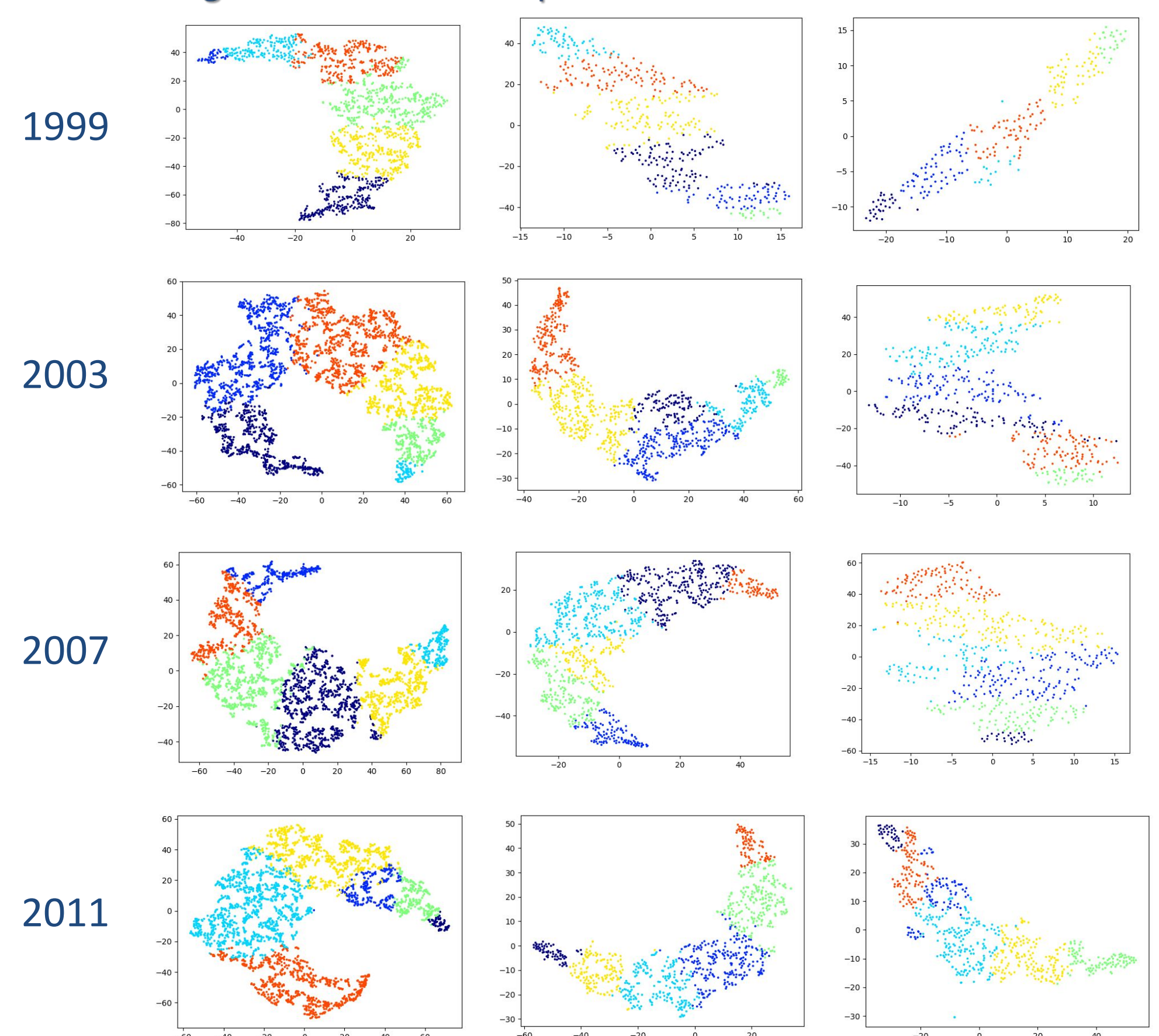
## Workflow



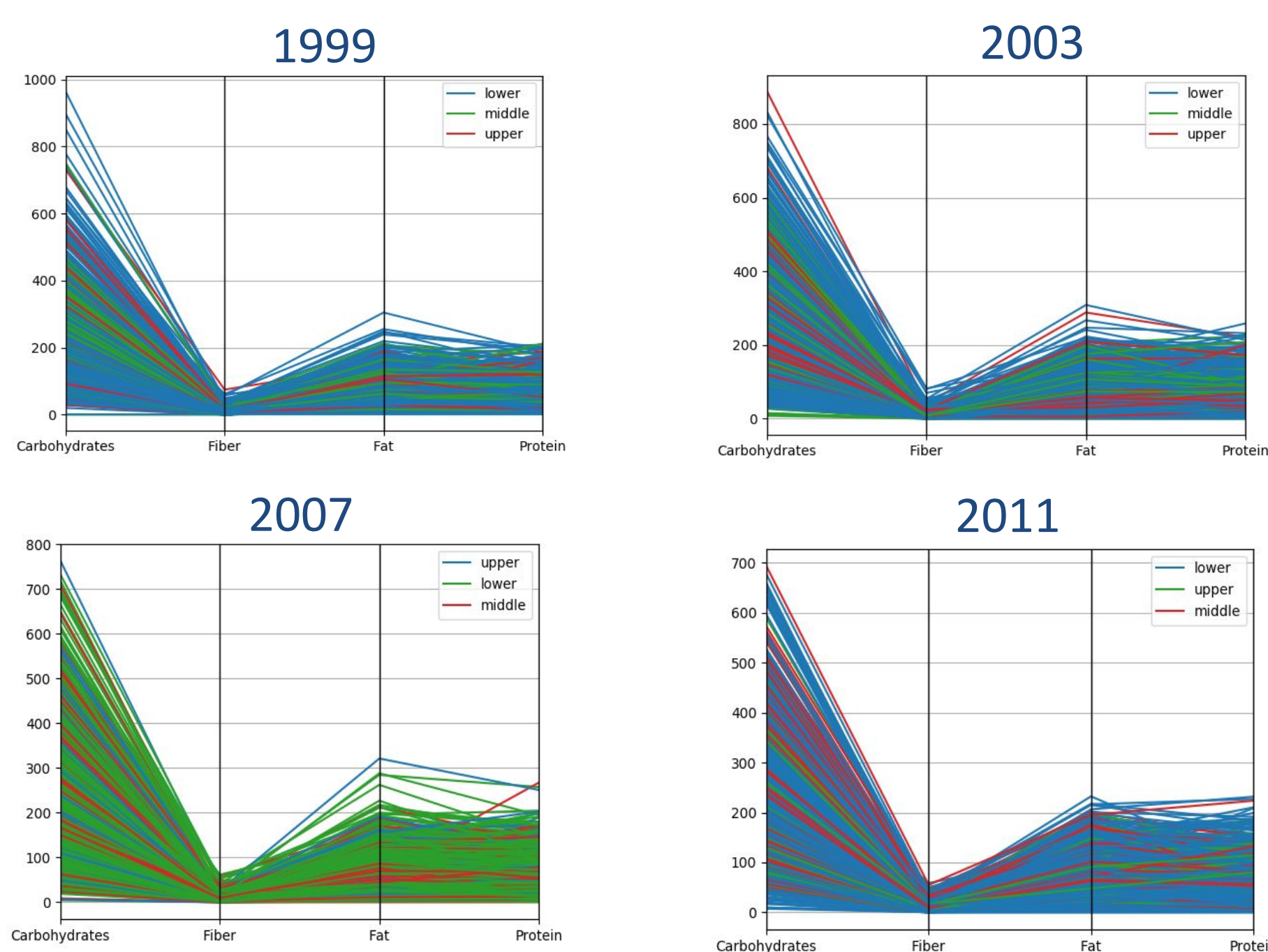
## Clustering and Trend Analysis

### Clustering using K-Means

- K yields the least within set sum of squares error (WSSSE) → 6
- Distance metric → Euclidean
- 6 clusters correspond the 6 sections of ipr values ranging from 1 → 6
- Clusters generated are 2D depictions of 4D information



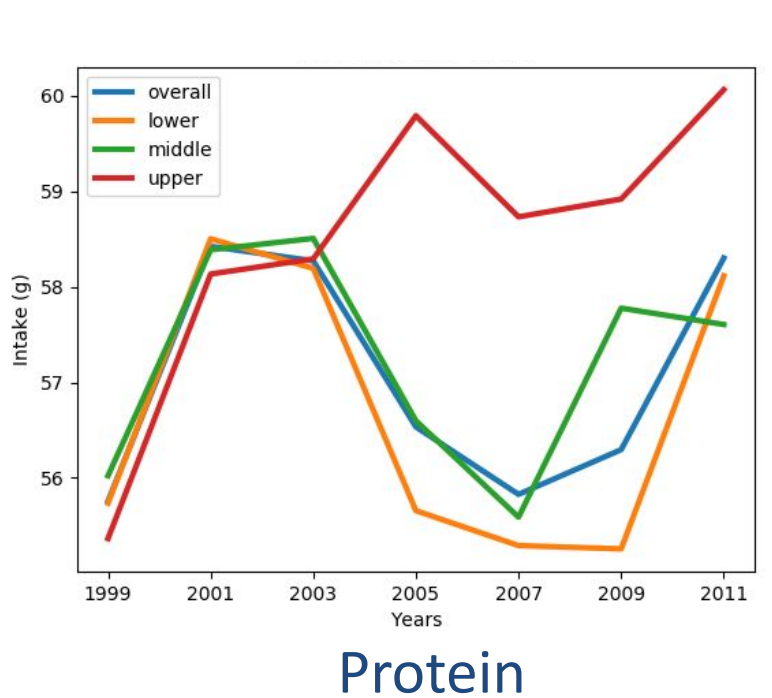
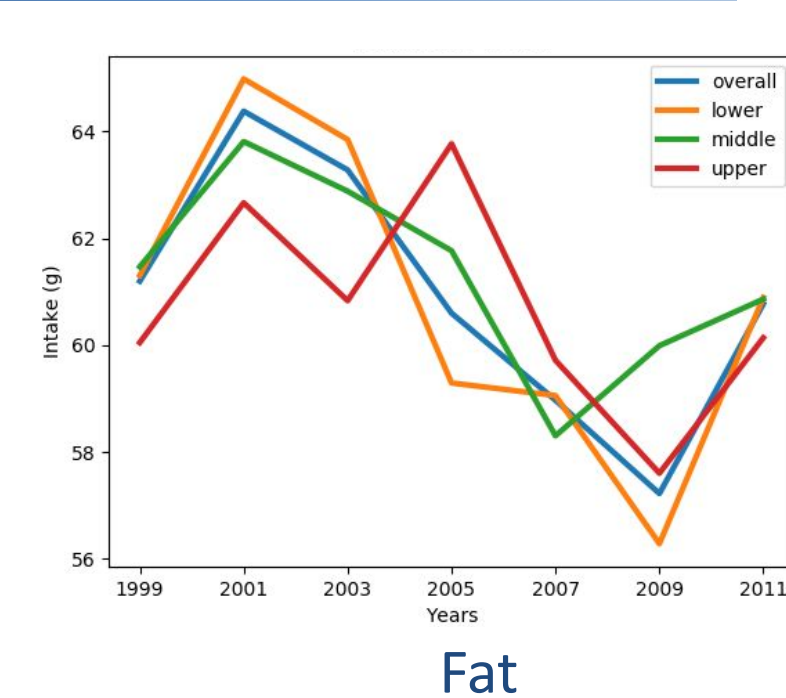
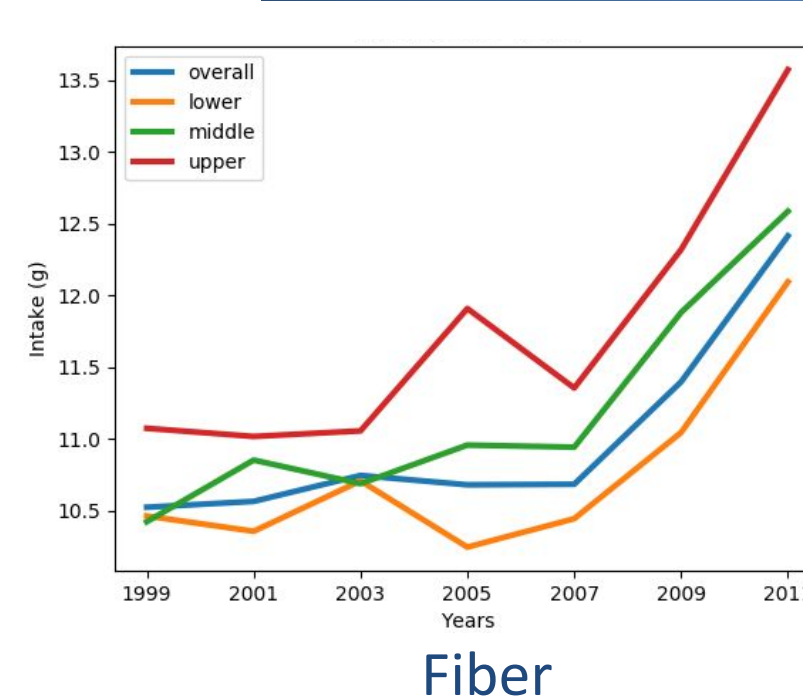
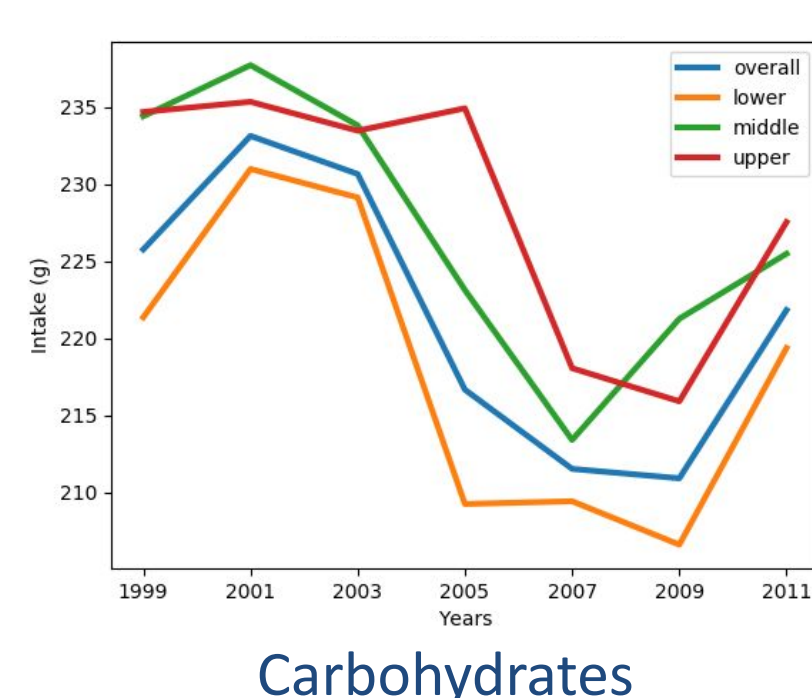
### Representation of per day nutrient intake in (g) across classes



- Carbohydrate consumption → significantly high
- Fiber consumption → extremely low
- Average carb consumption per day has been decreasing over the years

## Few Insights

- Food intake irrespective of financial class is carbohydrate dominant
- High carb intake may be due to the increase in junk and soda intake among children.
- The overall mean dietary intake is close to lower financial class behavior because they form the majority in the dataset



### Class Wise Nutrient Intake Trend (1999-2011)

- Upper financial classes consume higher quantities of macronutrients
- They outperform other classes especially in fiber and protein intake
- This may be due to greater diet awareness and also a superior educational background.
- Lower financial classes fall behind other classes in overall macronutrient consumption and have the highest possibility of diabetes diagnosis.
- This may unfortunately be due to lack of access to high quality food and education.