5011CEM Big Data Programming Project

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Agenda

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2	Data Analysis – Dataset Explanation
3	Data Analysis – Findings and Discussion
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Data Analysis - Objective

- To study the **eating habit** of people based on data of Tesco Grocery 1.0 by splitting all lower super output areas (LSOAs) into different **clusters based on food purchase** by weight.

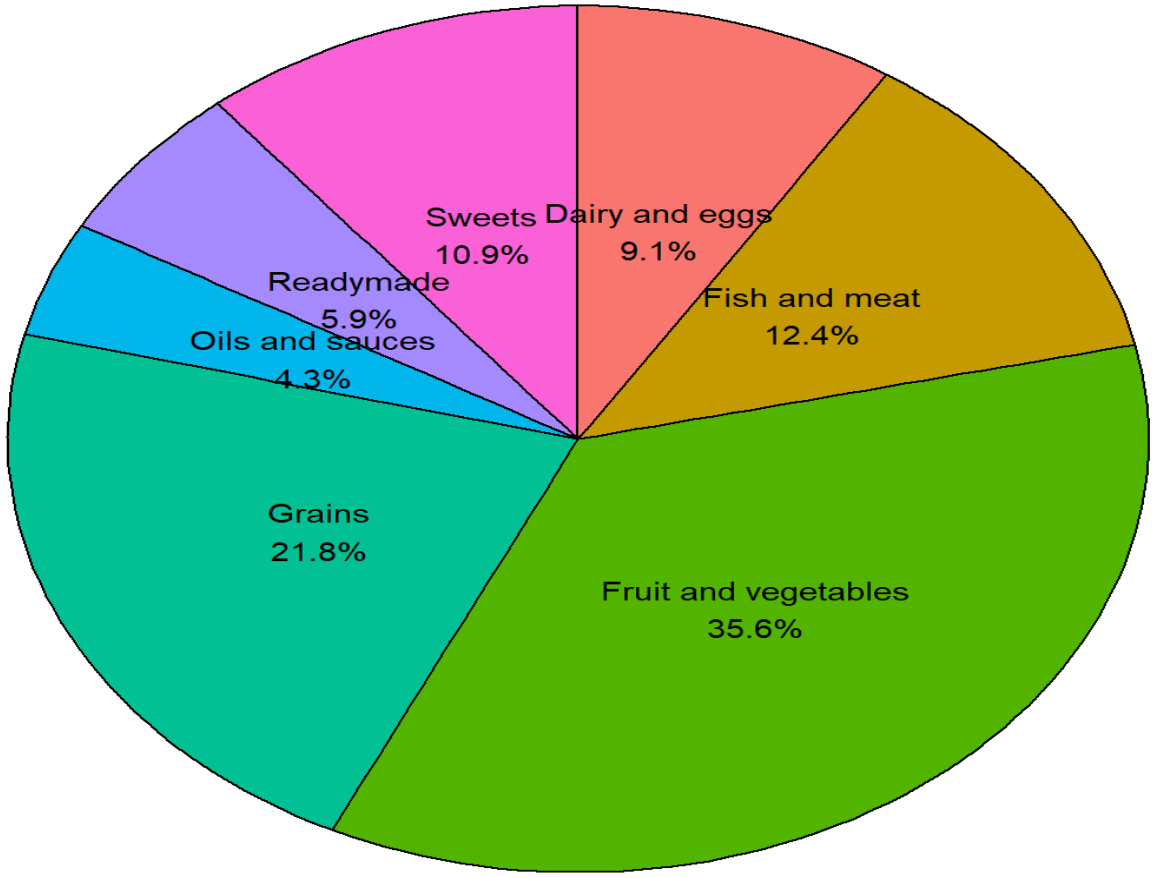
Data Analysis – Dataset Explanation

- Dataset used is f_{category}_weight from Tesco Grocery 1.0
- f_{category}_weight explains the fraction (by weight) of that category of food purchase of Londoners in Tesco outlet in 2015

Data Analysis – Dataset Explanation

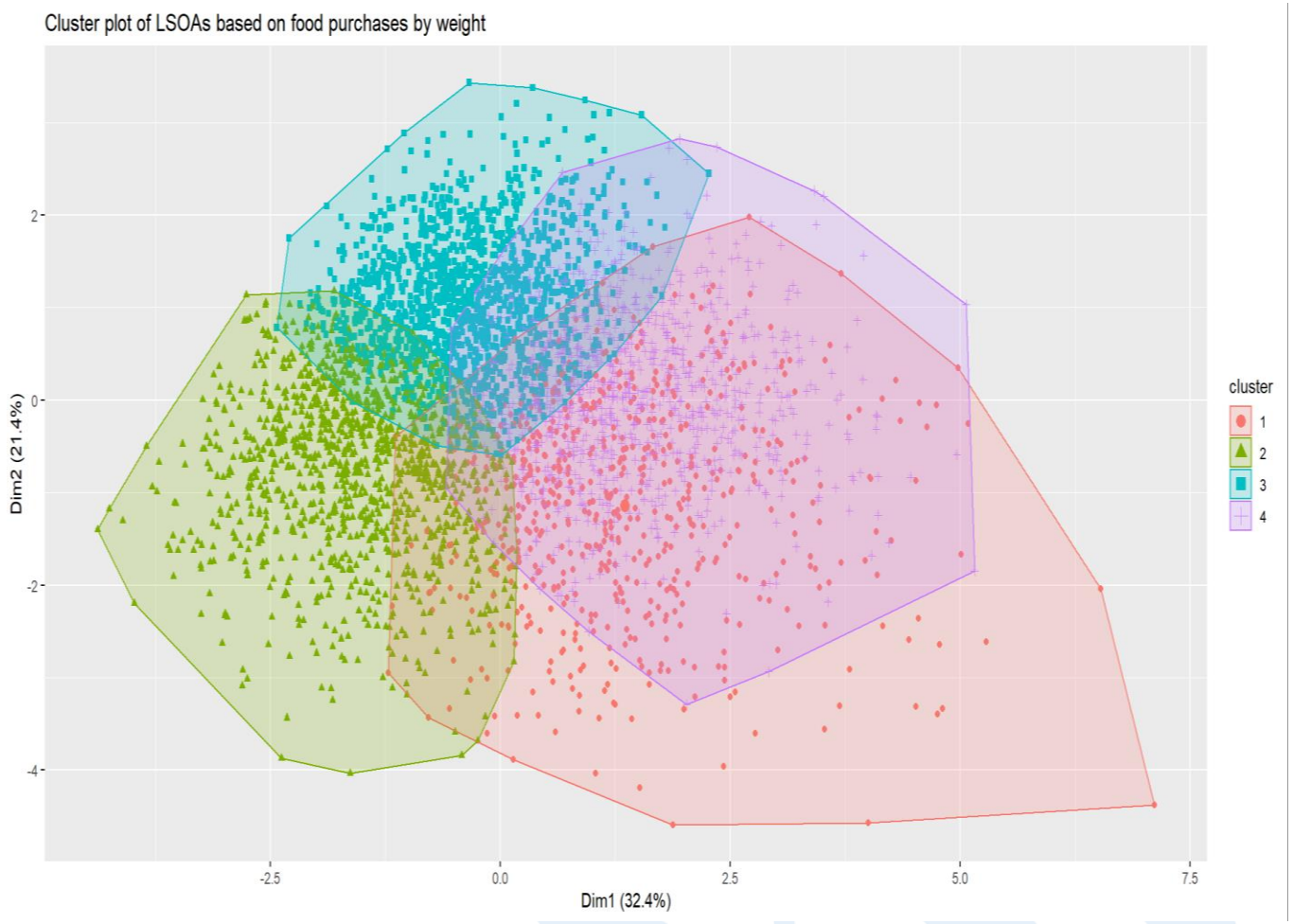
The most purchased category is fruit and vegetable (35.6%), followed by grains (21.8%), fish and meat (12.4%), sweets (10.9%), dairy and eggs (9.1%), readymade (5.9%), and the least purchased is oils and sauces (4.3%).

Pie chart of food purchase by weight in 2015



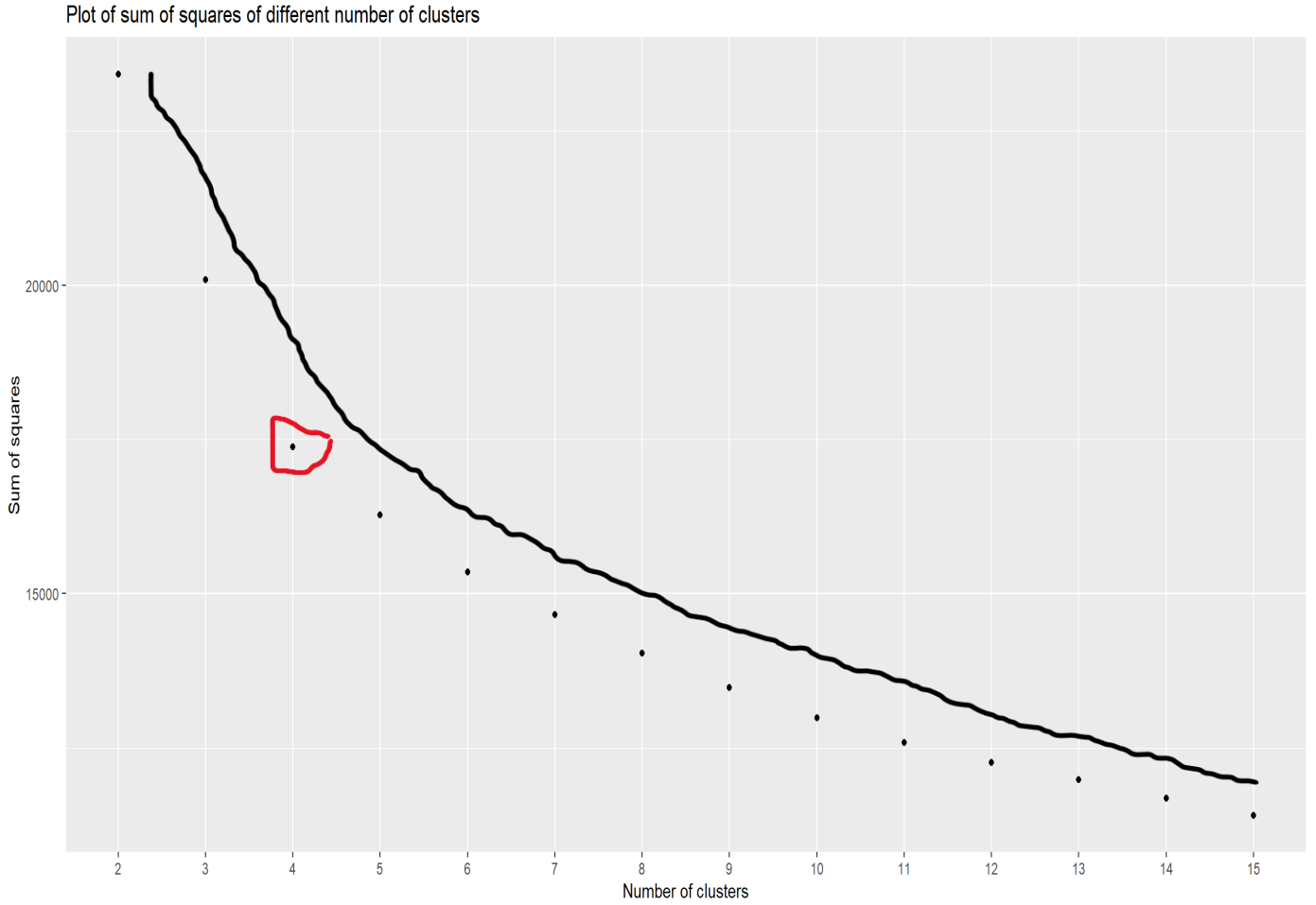
Data Analysis – Findings and Discussion

All areas are grouped into 4 clusters based on the difference in weight of food purchase in 7 categories



Cluster validation

The “elbow point” is at 4, so 4 is a good k value to choose.



Cluster Analysis

Cluster	Description
1	High consumption of readymade and sweets and low consumption of dairy and eggs.
2	High consumption of fruit and vegetable and dairy and eggs and low consumption of grains.
3	High consumption of oils and sauces and fish and meat.

Conclusion

- Managed to achieve objective of data analysis, which is clustering of different areas based on difference in food purchase

Coventry University

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Guardian University Guide 2018

4th for Student Experience and Teaching Quality
The Times and Sunday Times Good University Guide 2017

Queen's Award for Enterprise
International Trade 2015