

Manchester City Council-Knowing our residents: Population Segmentation Developing Population Segmentation Model: An Effective Way to Knowing Residents

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Overview of the Data Fellowship

I focused on developing the population segmentation model in my 8-week data fellowship with Manchester City Council's Performance, Research, and Intelligence team. This population segmentation model aimed to categorise residents based on various indicators, such as well-being, to tailor policies that address each group's needs.

My tasks included data analysis, researching similar approaches by other city councils to identify gaps and opportunities for the team, and creating presentations for stakeholders to demonstrate the effectiveness of the population segmentation approach.

Data Analysis and Findings

For data analysis, I primarily used Excel and ArcMap GIS. My focus was twofold: first, using ArcMap GIS to present demographic differences across wards, and second, using Excel to verify the validity and coherence of different datasets. Through both data analyses, I have found the disparities between different groups, such as universal credit, death age, income, and knowing the procedures of making targeted policies, which can be helpful to have a positive impact on different groups.

- Among Manchester's 32 wards, characteristics of residents vary, leading to differing demands and needs across areas. Experian developed a tool, Mosaic, to segment residents based on characteristics such as property and lifestyle. The graph in Figure 1 shows one of the ways Mosaic groups individuals. It groups individuals into 15 summary groups and 66 detailed types, which are given codes and names based on similar demographics, lifestyles and behaviours.

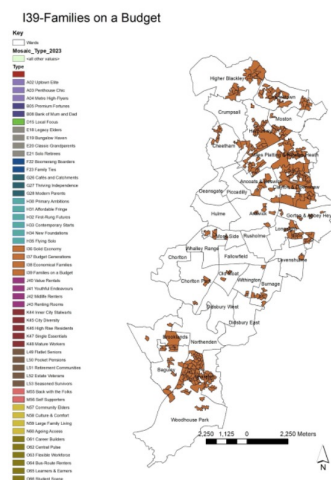


Figure 2- Spread of I39 in Manchester

By using GIS, I mapped the distribution of mosaic groups. For example, Figure 2 illustrates the distribution of the "I39 - Families on a Budget" segment, which includes families with children living in low-value social housing and making careful use of limited resources. Finding the distribution of certain groups will support the targeted policy development. For example, if the certain group has a high health risk, the following policies can be made to increase the healthcare resource allocation to this area.

Another task was verifying the validity and coherence across datasets. For instance, I compared income data from two datasets. Using Power Query, I analysed discrepancies in reported wages for the same postcode level, finding significant differences. Then, I quantify these disparities and identify regions or population groups with the inconsistencies. Since these datasets are confidential, specific details are not presented here.

Key Skills Learnt

- Data Analysis and Interpretation-The training provided taught me how to use ArcMap GIS and Excel effectively for data research. One memorable training session is how to identify reliable data sources and apply them to various research projects.
- Professional Environment Familiarisation- I participated in meetings with various teams and external stakeholders, both online and offline. This experience helped me to understand how ideas were exchanged and work progressed in a professional setting.
- Understanding of England's public sector- Daily interactions with government workers provided a valuable perspective on the UK government's operations. Also, I observed a full council meeting, gaining firsthand insight into democratic decision-making processes.
- Improvement of Argument Skills- This internship helped me adopt a broader perspective by stepping outside my student mindset to understand the rationale behind government solutions and allowing me to approach social issues with greater comprehension and analytical depth.



Figure 1-Experian's Mosaic Types