[DataViz Final Project Proposal] Taiwan 2024 Presidential Election: Visualization of Regional Voting Results with Combined Analysis of Income Levels and Education Levels

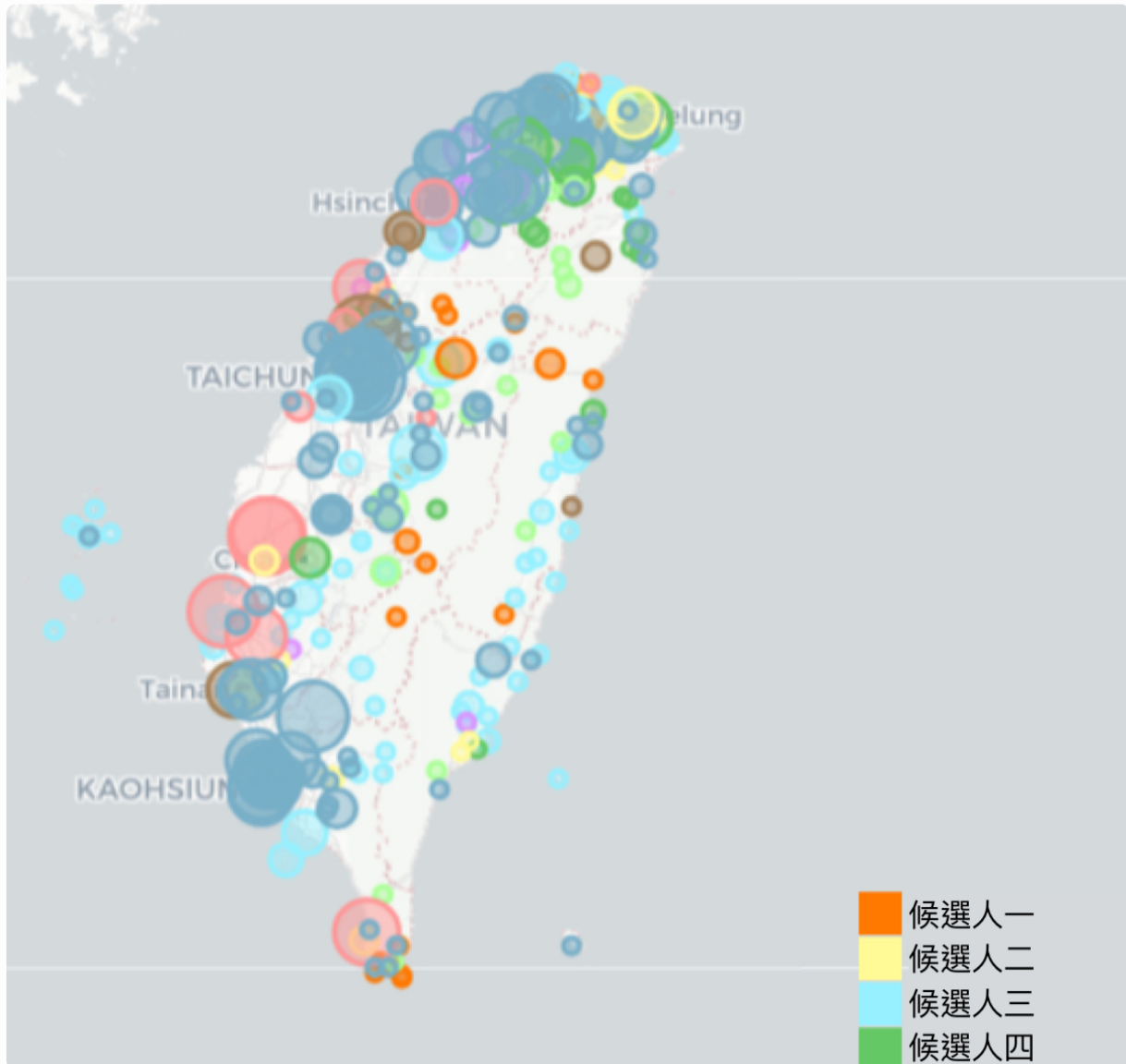— 👤 Group 23: 陳軒宇, 劉杰睿, 楊芊華

Introduction

This study will focus on the 2024 Taiwan presidential election, exploring the relationship between voting results in different regions and socioeconomic backgrounds, specifically how income levels and education affect the support for each candidate. Through data visualization techniques, an intuitive way is provided to analyze changes in political preferences across regions with variations in income and education levels.

Methodology

Heat Map Combined with Taiwan Map

To intuitively present the regional support tendencies for major candidates in the 2024 presidential election, this study will use D3.js to create a Taiwan map combined with a Heat Map, detailed down to the village level, to display voting behavior patterns in various regions. The size of the circles will express the number of voters, showing the regional support tendencies for major candidates, providing an in-depth understanding of the
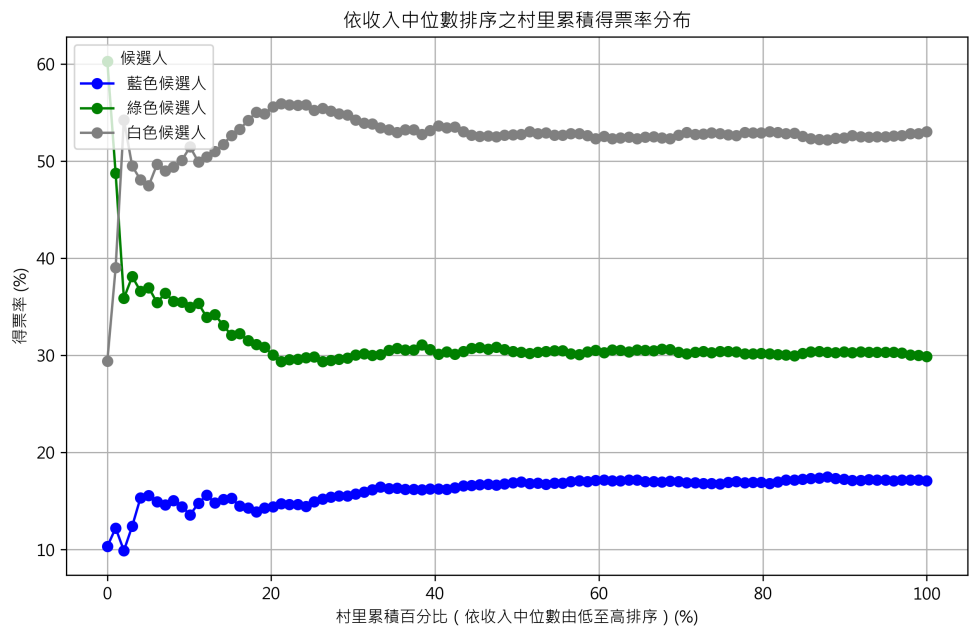
voting results in different regions.

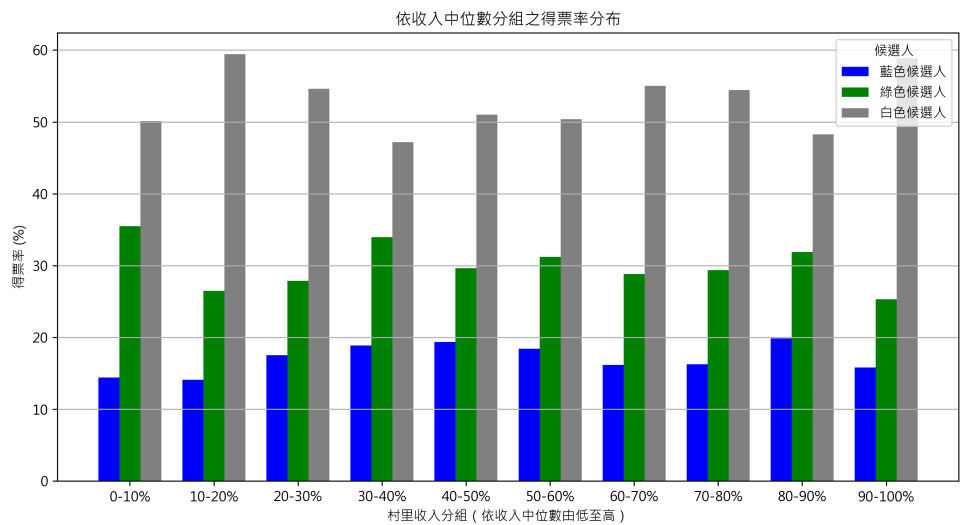## Visualizing the Voting Tendencies of People with Different Income Levels and Education Degrees

To further explore the impact of income and education level on voter behavior, this study will rank the villages based on median income and the proportion of the population with a university degree or higher. Line charts and bar charts will be used to display cumulative voting proportions and sectional voting proportions, respectively.

1. Display the cumulative voting ratio of villages after sorting according to the specified target using a line chart, and you can display the cumulative voting ratio for a specific

interval $[l, r]$ according to user requirements.

依收入中位數排序之村里累積得票率分布

2. Display the voting ratio of villages in an interval using a bar chart after sorting according to the specified target, with the interval size set to a certain proportion (10%).

依收入中位數分組之得票率分布

Expected Demonstration

Contribution

This study, through the analysis of composite data, provides a concrete approach to understanding the support tendencies of voters in various regions and explores the impact of factors such as income and education level on electoral voting behavior. Such insights are guiding for future election policymakers, strategy planners, and political analysts, offering a reference basis for voter behavior.

Dataset

- 選舉資料庫
- 政府開放資料:各村里教育程度資料
- 綜稅綜合所得總額全國各縣市鄉鎮村里統計分析表 ｜ 政府資料開放平臺