Explanation thesis project:

This thesis examines the impact of school catchment areas on the distribution of Western and non-Western children in primary schools, school segregation, and accessibility. Catchment areas influence school allocation and equal opportunities. The 15-minute city concept can improve accessibility but may also reinforce segregation by limiting school choices.

The thesis compares Amsterdam, an organically developed city, and Almere, a planned city from 1970, analyzing primary school segregation using data from CBS and DUO. The Dissimilarity Index (D) measures segregation levels. Three catchment area scenarios are examined: (1) local neighborhood reallocation, (2) constrained 2 km radius, and (3) 15-minute city reallocation.

In Python, the datasets were analyzed, and various calculations were performed to derive answers. Additionally, visualizations were created. Everything is documented in the notebooks. For each scenario and each city, the research process through programming is clearly visible.

Datasets: Centraal Bureau voor de Statistiek (CBS)

1. CBS-gebiedsindeling van 2024 – Contains geographical division data of the Netherlands, used for Almere.

2. CBS-gebiedsindeling van 2023 – Contains geographical division data, used for Amsterdam.

3. Kerncijfers wijken en buurten 2024 – Demographic data on population by district and neighborhood, including nationality and age distribution.

4. Wijk- en buurtkaart 2023 versie 2 – Provides detailed neighborhood information, including district codes, municipality codes, and spatial characteristics such as distances to facilities.

Datasets: DUO Open Onderwijsdata (Dienst Uitvoering Onderwijs)

5. Alle schoolvestigingen basisonderwijs – Contains address information of primary schools, including geographical coordinates and school board details.

6. Historische leerlingenaantallen per schoolvestiging – Overview of student numbers per school location from 1996 to 2023.