Why we used both regression and classification

Regression is used when the target variable is continuous, such as predicting population ('total2020') based on other features like geographical coordinates, shape area, average income rate, etc..

Classification is used when the target variable is categorical or consists of discrete classes. In our dataset, you might classify districts into different categories based on some criteria, such as classifying districts into high, medium, and low population density regions.

By performing both regression and classification, we gained a more comprehensive understanding of our data whereby Regression helped us in understanding the relationships between variables and making predictions about continuous outcomes such as predicting population ('total2020'), while classification helps in categorizing data and identifying distinct groups or classes such as classifying districts into high, medium, and low population density regions.

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Our problem required different approaches. For instance, predicting population growth requires regression analysis, while identifying districts with similar characteristics required clustering or classification.