

# YZV202E PROJECT PROPOSAL

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**Project Topic:** Optimizing Population Distribution: Strategic Relocation from Overcrowded to Underpopulated Cities in Türkiye.

**Problem Context and Significance:** Urban overpopulation leads to environmental degradation and reduced quality of life, while underpopulated cities face economic stagnation. This project seeks to redistribute populations from crowded to sparse urban areas to balance these disparities, thereby improving public health, safety, and environmental sustainability.

**Optimization Techniques:** We will use linear programming to model constraints such as transportation costs and housing capacities, and apply heuristic methods like genetic algorithms for finding feasible solutions.

**Contributions to Sustainability:** This initiative aims to reduce urban sprawl, enhance public health, and ensure safety by decreasing population density. Additionally, it supports economic growth in underpopulated areas, fostering social and cultural revitalization.

**Alignment with Project Topics:** The project aligns with sustainable urban planning by addressing key issues of resource allocation and promoting a balanced regional development, thereby demonstrating a comprehensive understanding of sustainable urban dynamics.

**Datasets:** [https://drive.google.com/drive/folders/1\\_Qd1j2Ot1aXzq4wnI-WVdePdh2mqiPZ-?usp=drive\\_link](https://drive.google.com/drive/folders/1_Qd1j2Ot1aXzq4wnI-WVdePdh2mqiPZ-?usp=drive_link)