

# **PROJECT – 02**

## **Project Report: Regional Insights Dashboard: Comprehensive Zip Code Analysis**

**Course: IE6600 Computation and Visualization**

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### Tableau URL:

<https://public.tableau.com/app/profile/shivakumar.hassan.lokesh/viz/RegionalInsightsDashboardComprehensiveZipCodeAnalysis/Dashboard1>

### Methodology for Variable Weighting and Comprehensive Score Calculation

### 1. Normalization:

Each variable was normalized to a scale of 0-10. For positive indicators (education, income, employment, population), higher values received higher scores. For negative indicators (crime rate, housing prices), higher values received lower scores.

## 2. Weighting:

Each variable was assigned a weight based on its importance:

1. Population (10%): Smaller weight as it is less indicative of quality
2. Education (20%): Higher weight as education is a key quality-of-life factor
3. Employment Rate (20%): Equally important as it reflects economic stability
4. Median Household Income (20%): Strong indicator of financial well-being
5. Housing Prices (10%): Moderate weight as it reflects affordability
6. Crime Rate (20%): High weight as safety is critical

### 3.Comprehensive Score:

The weighted sum of the normalized scores was calculated to assign an overall score to each zip code.

### Data Citation:

1. U.S. Census Bureau. (n.d.). San Francisco city, California: Income and poverty. [Data.Census.Gov](#)

Data Retrieved [12/08/2024] from

<https://data.census.gov/profile?q=San%20Francisco%20city,%20California%20Income%20and%20Poverty>

2. CrimeGrade.org. (n.d.). Crime Grade: Crime data and safety ratings. Retrieved [12/08/2024], from <https://crimegrade.org/>

- 3.Zillow. (n.d.). Home values in San Francisco, CA 20330. Zillow. Retrieved [12/09/2024], from <https://www.zillow.com/home-values/20330/san-francisco-ca/>