Opportunity Projects

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Redfin’s Opportunity Score

Opportunity Score is an online tool that helps Americans find homes within a 30-minute car-free commute to nearby jobs.

Opportunity Score assigns an address a rating, from zero to 100, that represents how easy it is to get to nearby jobs without a car.

The land of opportunity looks very different across cities depending on how accessible jobs are via public transit or biking.

#1. San Jose, CA
opportunity score of 70
How We Built Opportunity Score

Opportunity Score is powered by:
- The Walk Score Travel Time API
Opportunity Score factors in block-level employment data exploded to random points within the polygon from the Department of Commerce (LEHD Origin-Destination Employment Statistics). Opportunity Score includes jobs with a minimum annual salary of $40,000.
How We Built Opportunity Score

After we count up the jobs, we factor in the population in a 30-mile buffer from the origin point using block group population estimates from the Census Bureau.
How We Built Opportunity Score

Then we do some math:

- Redfin uses a binomial distribution to create an Opportunity Score value proportional to the probability of getting a transit commutable job.
- First, we count the number of jobs that are accessible in 30 minutes by transit, along with the population of the area in a 30 mile buffer.
- This gives us a score between 0 & 100 for each point

\[
\text{OppScore}(n, p) = \sum_{k=1}^{n} \frac{n!}{k!(n-k)!} \times p^k \times (1-p)^{n-k}
\]

\[
p \propto \frac{1}{\text{Local Population}} \quad \quad n \propto \text{Transit Commutable Jobs}
\]
How We Built Opportunity Score

Additional data provided: Breakdown of the distribution of job categories accessible within the 30 minute carless commute from the address of interest:
How We Built Opportunity Score

Additional data provided:
Real-time median asking price data from Redfin.com within the 30-minute commutable region updated daily.

Real-time median asking rents from walkscore.com within the 30-minute commutable region updated daily.

A series of python scripts queried our databases daily to check for active asking prices and rents by bedroom and stored by region within the database.
How We Built Opportunity Score
Additional Opportunity Tools: Job Opportunity Tool

Shows metro-area job clusters and metro-area pay ranges for a given occupation from the Bureau of Labor Statistics and compares various components of cost of living to evaluate disposable income.

https://www.redfin.com/blog/job-opportunity-tool/
Thank You!

Q&A