Discretionary Income Analysis

ECE 143 Group 25

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Motivation and Objectives

- Salary ≠ usable income, yet often considered as the metric of success
- Different region: different salaries, costs
- Calculating usable income by region achievable with big data

Data insights are tools for self empowerment



'Usable income': Discretionary Income (DI)

Gross wages: \$90,000 Taxes: (20,000)

Disposable Income: \$70,000

Mortgage/Rent: (20,000) Food/Medicine: (10,000)

Utilities: (5,000) Clothing: (5,000)

Car Payment: (5,000)

Discretionary Income: \$25,000

<u>Discretionary Income</u>: "Income remaining after deduction of taxes, social security charges, and basic living costs." -Oxford Dictionary

Discretionary Income *as used* by Universities, Banks, etc:

DI = Salary - 1.5 * (Federal Poverty line) DI = (**Salary - \$18,735**) (2019 data)

Methodology





- Cost of Living Computation from Individual Elements
- DI Calculation



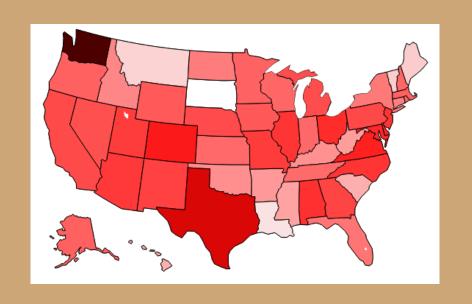
Data Cleaning

- Removal of Data with Missing Entries
- CSV Formatting
- Data Mapping to Consistent Index

Data Visualization

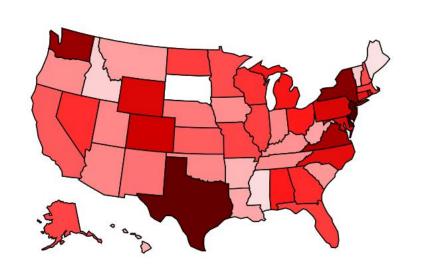


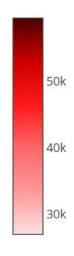
Distribution of Discretionary Income over United States for Different Industries



Management Reigns in the East Coast and Texas!







Management

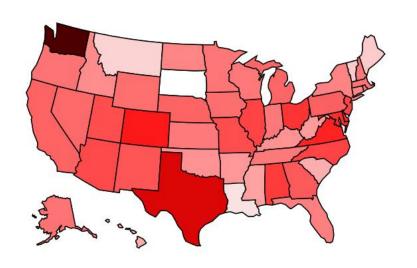
Management

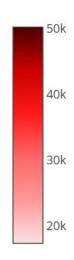
Healthcare Practitioners & Technical

Installation, Maintenance, & Repair

Computer Science – Consistent All the Way





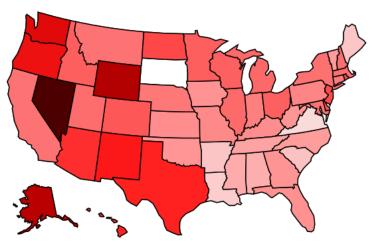


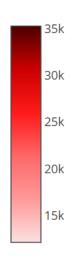
Computer & Mathematical

Installation, Maintenance, & Repair

Healthcare – West Outperforms East United States



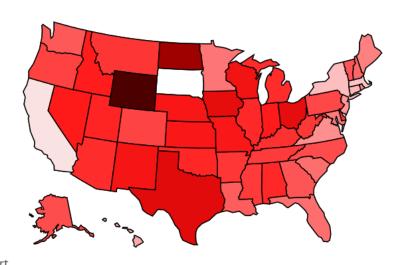


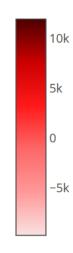


Healthcare Practitioners & Technical

Administrative Staff - Struggle to Make Meets End







Office & Administrative Support

Installation, Maintenance, & Repair

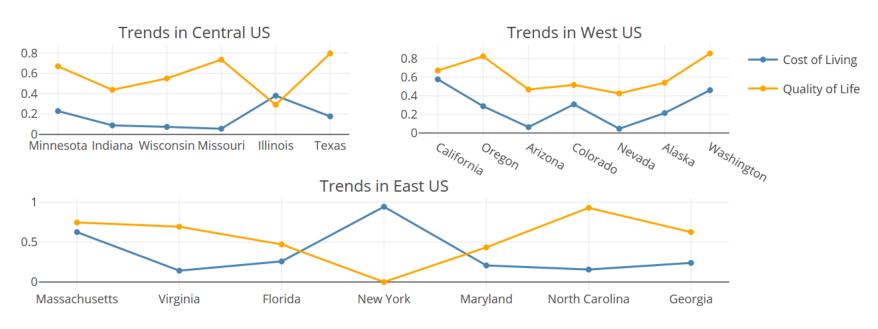
Analysis of Trends in Income Components for Different Regions of US

- Broad division of US into east, west and central regions
- Cost of Living Vs. Quality of Life
- Quality of Life Vs.
 Discretionary Income

You Cannot Pay for the Quality of Life you Desire!



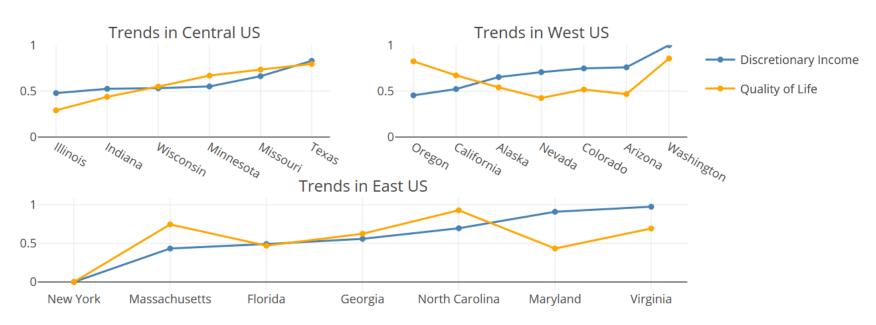
Comparison of Cost of Living with Quality of Life



Maybe, Money can Buy Happiness!



Comparison of Quality of Life with Discretionary Income



Comparison of Top Metropolitan Cities with their Neighbors in that State

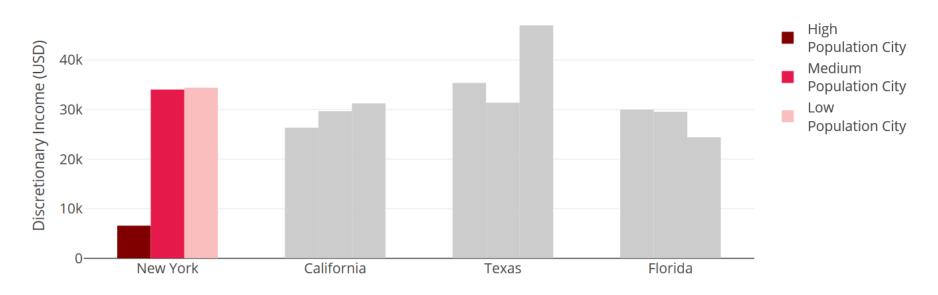
Population Decreases and Quality of Life Increases from First City to Last





New York - Stark Difference over Small Physical Distance

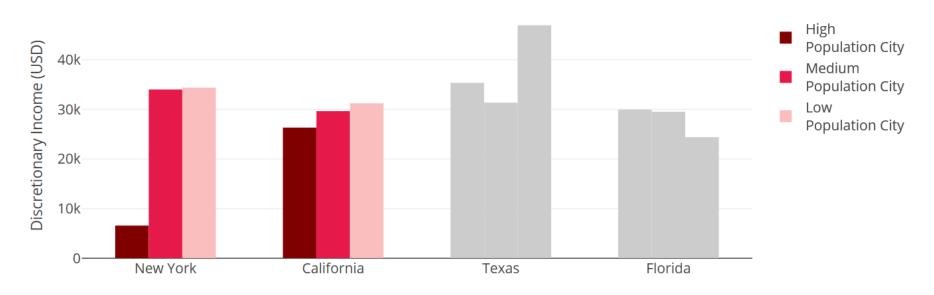
Discretionary Income Trends in Prominent States



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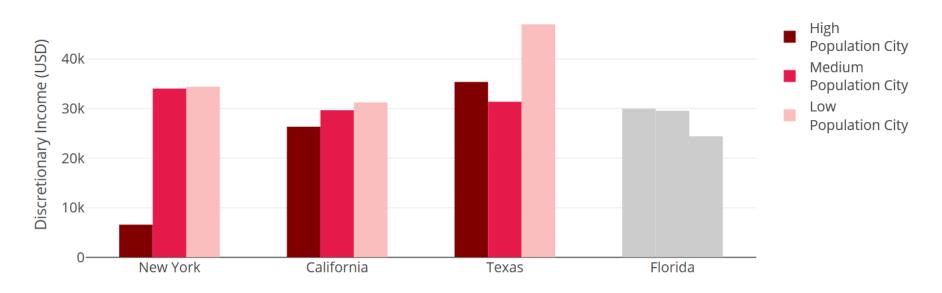
California – Consistency due to State-wide Standardization

Discretionary Income Trends in Prominent States



Texas - Content Metropolitan Life Demands more Investment

Discretionary Income Trends in Prominent States



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Florida - Quality of Life in sync with Cost of Living

Discretionary Income Trends in Prominent States



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Discretionary Income Analysis Tool – A Use Case

How to Choose the Best Data Science Engineer job in United States?







Top Job Offers on the Table









JOB TITLE

Data Engineer

SALARY

134,958\$/year

LOCATION

New York City, NY

JOB TITLE

Data Scientist

SALARY

130,405\$/year

LOCATION

San Francisco, CA

JOB TITLE

Data Engineer

SALARY

127,095\$/year

LOCATION

Austin, TX

JOB TITLE

Data Scientist

SALARY

112,045\$/year

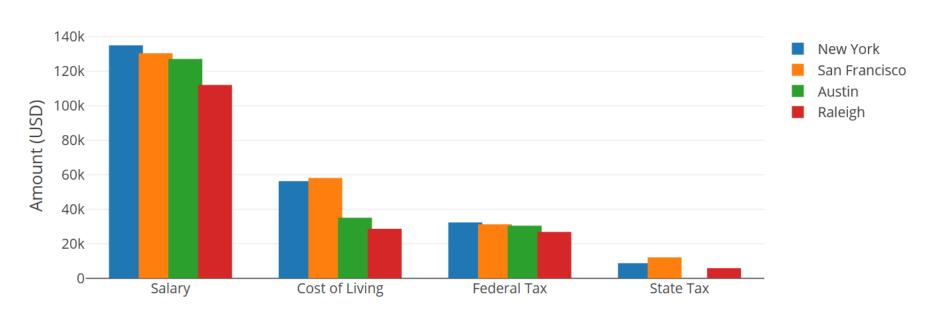
LOCATION

Raleigh, NC

Salary Breakdown into Critical Components



Income breakdown for Job Postings

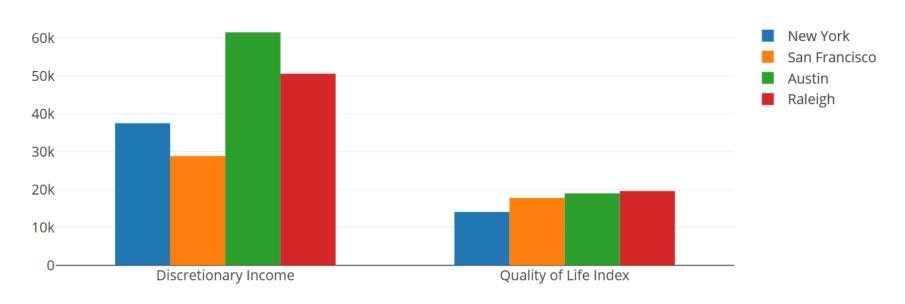


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Top Two Contenders: Austin and Raleigh



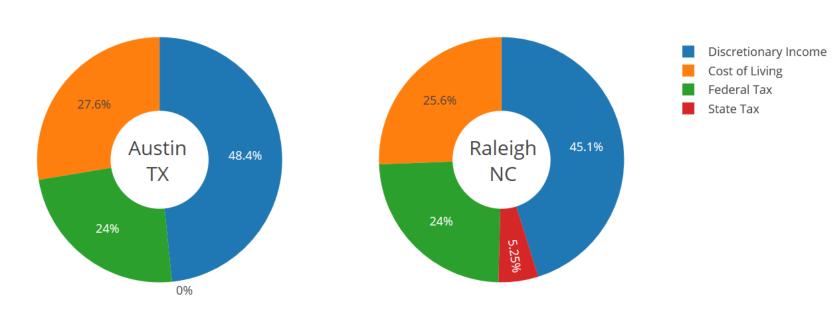
Discretionary Income and Quality of Life Comparison



And the Winner is: Apple, Austin TX



Income Breakdown for Top Contenders



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Key Takeaways

Discretionary Income

Large discrepancies in Actual vs Applied

Correlations

Population

Quality of Life

← C

Cost of Living

Discretionary Income

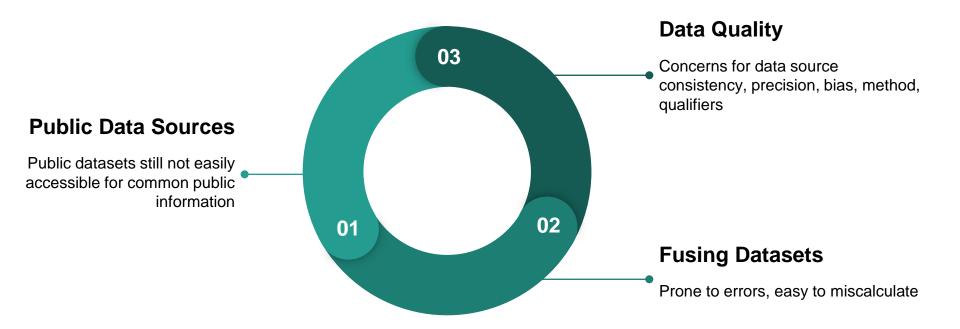
Industry Trends

West Coast: **Good** for CS, Technology, Medical

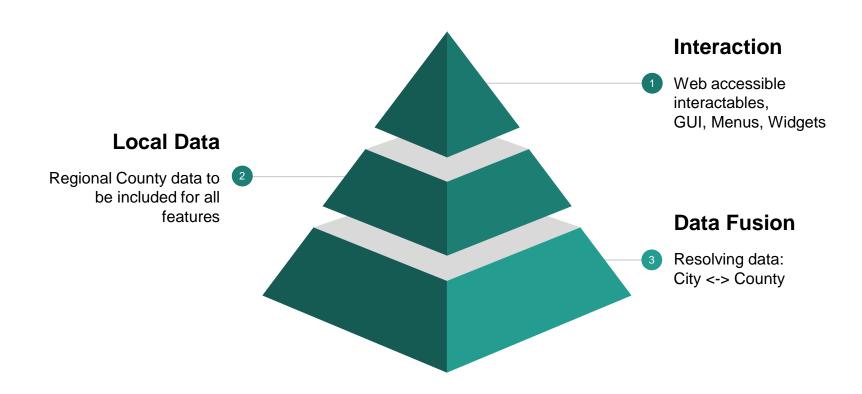
Bad for Administrative Staff

East Coast: Good for Management, Administrative

Problems Encountered



Improvements for Next Stage



Need Help Deciding Which Job Offer to Take?

Contact Us: which jobtotake @gmail.com

Thank You!