Agenda for Today

- Announcements
- MoE: from count data to proportions (and percentages)
- The LEHD program
- Lab 4: LEHD data

Announcements

Piazza

Student Roster: Download Roster as CSV

...out of 55 (estimated) Edit

37 enrolled

Signup Link:

piazza.com/berkeley/summer2020/cp101

Why Piazza?

Student Roster: Download Roster as CSV

...out of 55 (estimated) Edit

37 enrolled

Democratic

- all students have access to questions and answers (vs. sending an email to instructors)
- Other students can answer questions

nttps://piazza.com/legal/ferpa

Why Piazza?

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Privacy

- Comply with Family Educational Rights and Privacy Act (FERPA) regulations
- email addresses and course enrollment information are only accessible to instructors of the class
- Posts remains anonymous to classmates
- Only instructors and enrolled students can access posts

https://piazza.com/professors/show/ming_chow

Why Piazza?

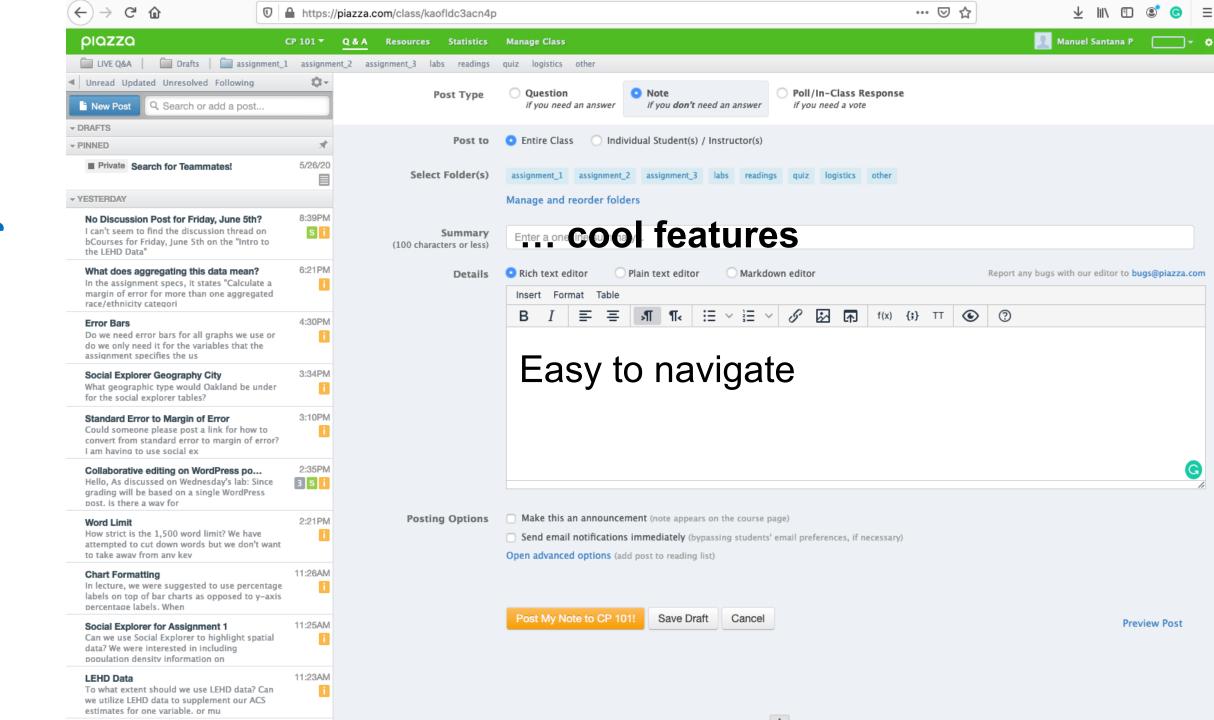
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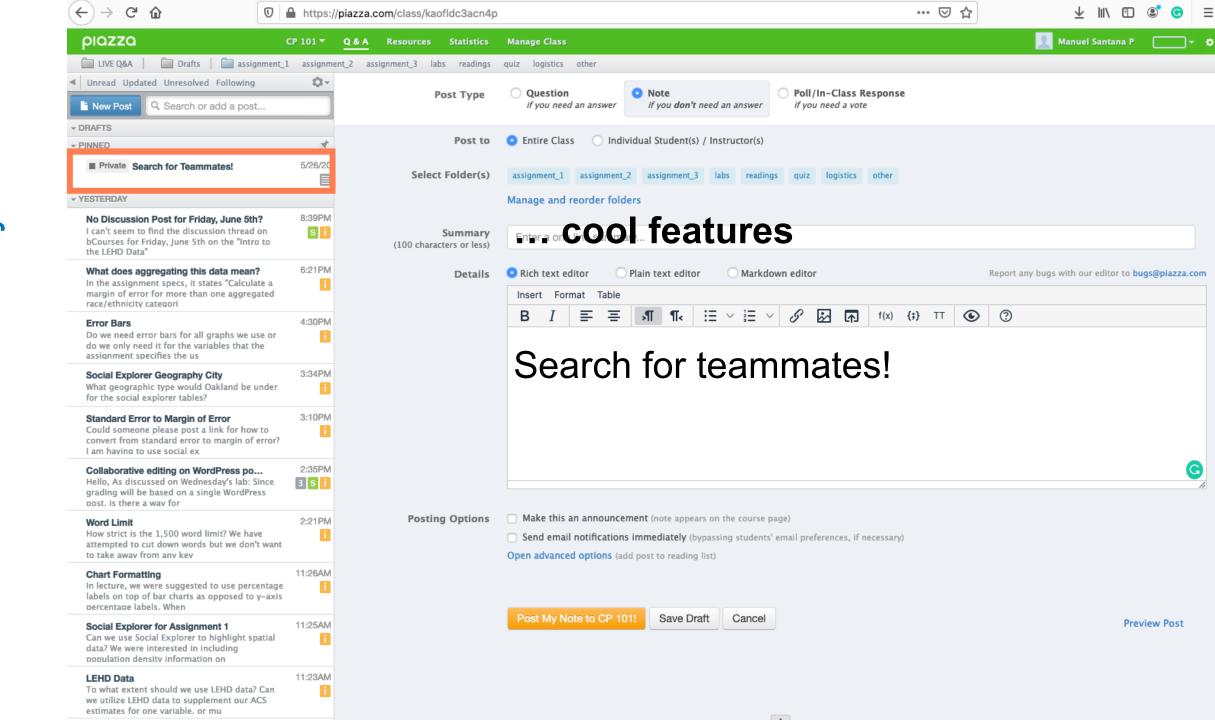
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... instructors also benefit

Piazza helps instructors eliminate their over-crowded email inboxes





... so please, enroll in piazza.com/berkeley/summer2020/cp101

Reading Responses

Students are expected to respond to different sets of readings by submitting at least one question per session marked with an asterisk [*]

Assignment 1

- It is okay if you have more than 1,500 words. The word count does not include references, citations, and sources
- All data for one variable must come from the LEHD database –
 the only variable not found in the ACS is Commute Flows
- We will learn how to obtain commute flows data today during the lab
- WordPress does not allow for in-real-time collaboration

Assignment 1

How to obtain MoE from Standard Errors?

Margin of error
$$=MOE_{\gamma}=z_{\gamma} imes$$
 SE

Where z_{γ} denotes the *quantile* (also, commonly, a *z-score*)

The MoE reported by the Census are estimated with a 90 percent confidence level (z-score = 1.65)

Assignment 1

How to obtain MoE for percentages calculated from ACS count data?

Table 1 - Population by Age Group (Tract 4004)

| Age | Estimate | MoE |
|-------------------|----------|-----|
| Child | 678 | 161 |
| Working Age Adult | 2,810 | 247 |
| Senior Adult | 498 | 97 |
| Total | 3,986 | 250 |

Source: 2017 ACS 5-Year Estimates, Table S1810.

Note: Age summarized from Census table into three categories: "Child" (aged 17 and under), "Working Age Adult" (aged 18-64), and "Senior Adult" (aged 75 years and over).

3,500 3,000 Population estimate 2,500 2,000 1,500 1,000 500 Child Working Age Senior Adult Adult

Figure 1 - Population by Age Group (Tract 4004)

Source: 2017 ACS 5-Year Estimates, Table S1810.

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Understanding and Using American Community Survey Data

What All Data Users Need to Know

Issued July 2018

If we define the proportion as $\widehat{P} = \widehat{X}/\widehat{Y}$, then the MOE of this proportion is approximated as:

$$MOE(\widehat{P}) = \frac{1}{\widehat{Y}} \sqrt{\left[MOE(\widehat{X})\right]^2 - \left(\widehat{P}^2 * \left[MOE(\widehat{Y})\right]^2\right)}$$

Chapter 8, pg. 55

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| | <u>. </u> | <u> </u> | | | |
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| Child | 678 | 161 | 17.0% | 3.9% |
| Working Age Adult | 2,810 | 247 | 70.5% | 4.4% |
| Senior Adult | 498 | 97 | 12.5% | 2.3% |
| Total | 3,986 | 250 | | _ |

Senior Adult

Working Age Adult

Child

0% 20% 40% 60% 80%

Distribution

Figure 2 - Population Distribution by Age Group (Tract 4004)

Source: 2017 ACS 5-Year Estimates, Table S1810.

Notes: [a] **Base = 3,986**; [b] Age summarized from Census table into three categories: "Child" (aged 17 and under), "Working Age Adult" (aged 18-64), and "Senior Adult" (aged 75 years and over).

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The Longitudinal Employer-Households Dynamics Program



Introduction to Urban Data Analytics
Manuel Santana Palacios
June 05, 2020

LEHD



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Longitudinal Employer-Household Dynamics

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Useful Links

 Center for Economic Studies J2J Data LODES Data PSEO Data QWI Data VEO Data LED Workshop

Veteran Outcomes Experimental Data Released

The U.S. Census Bureau announces the release of experimental Veteran Employment Outcomes (VEO) statistics. These tabulations show earnings and employment outcomes for U.S. Army veterans one, five, and 10 years after discharge, by military occupation, rank, demographics, industry and geography of employment. VEO data can be accessed via VEO Explorer, an interactive data tool.

View VEO Data

Start VEO Explorer





What's New?

02/12/20: New Secure Electronic File Transfer Process for Local Employment Dynamics (LED) Partner File Submissions

Contact Information

View all announcements

Email us:

General

LODES/OnTheMap

QWI/QWI Explorer

J2J/J2J Explorer

About Us

The Longitudinal Employer-Household Dynamics (LEHD) program is part of the Center for Economic Studies at the U.S. Census Bureau. The LEHD program produces new, cost effective, public-use information combining federal, state and Census Bureau data on employers and employees under the Local Employment Dynamics (LED) Partnership. State and local authorities increasingly need detailed local information about their economies to make informed decisions. The LED Partnership works to fill critical data gaps and provide indicators needed by state and local authorities.

Under the LED Partnership, states agree to share Unemployment Insurance earnings data and the Quarterly Census of Employment and Wages (QCEW) data with the Census Bureau. The LEHD program combines these administrative data, additional administrative data and data from censuses and surveys. From these data, the program creates statistics on employment, earnings, and job flows at detailed levels of geography and industry and for different demographic groups. In addition, the LEHD program uses these data to create partially synthetic data on workers' residential patterns.



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Note

- The data released by LEHD are based on tabulated and modeled administrative data, which are subject to error
- Because the estimates are not derived from a probability-based sample, no sampling error measures are applicable.

 How has the distribution of women/men, race/ethnicity changed in certain employment sectors over time?

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- Who are the super-commuters in the Bay Area?

The Mercury News

WEATHER
TODAY'S E EDITION
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Bay Area super-commuting growing: Here's where it's the worst

Alameda, Contra Costa counties continue to lead the way in the worst Bay Area commutes











Hopfenbeck, a Bay Area native, is one of an increasing number of super-commuters —people whose journey to and from work takes 90 minutes or more in each direction ...



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Longitudinal Employer-Household Dynamics

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Applications

- J2J Explorer
- LED Extraction Tool
- OnTheMap
- OnTheMap for Emergency
- Management
- PSEO Explorer
- QWI Explorer
- VEO Explorer

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The U.S. Census Bureau announces the release of experimental Veteran Employment Outcomes (VEO statistics. These tabulations show earnings and employment outcomes for U.S. Army veterans one, five, and 10 years after discharge, by military occupation, rank, demographics, industry and geography of employment. VEO data can be accessed via <u>VEO Explorer</u>, an interactive data tool

/iew VEO Data

01-11/20 2-1---

Veteran Employment Outcor

Cata Type Earnings

550k

\$50k-

B 540K-

\$43,9

\$308-

-121.09131, 31.34417

1000 km

OnTheMap

Household

Home and Job

Locations

from US Census Bureau Worker

Home and Job

Locations

from state payroll tax records (unemployment insurance)

OnTheMap

Commute Flows

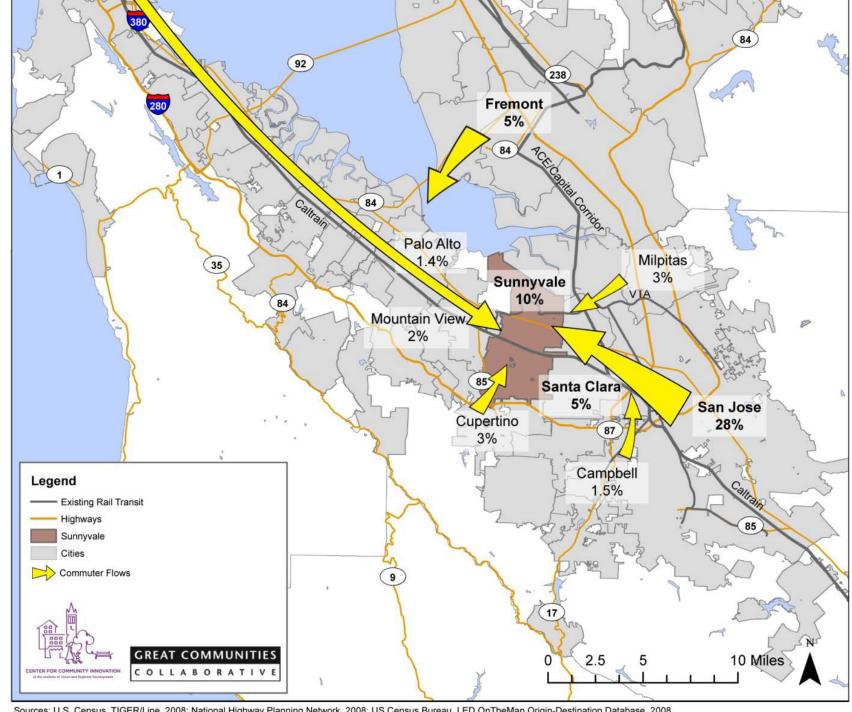
- Age
- Income
- Industry

Do we need housing or office space near the Sunnyvale Caltrain stations?



Where do Sunnyvale workers live?

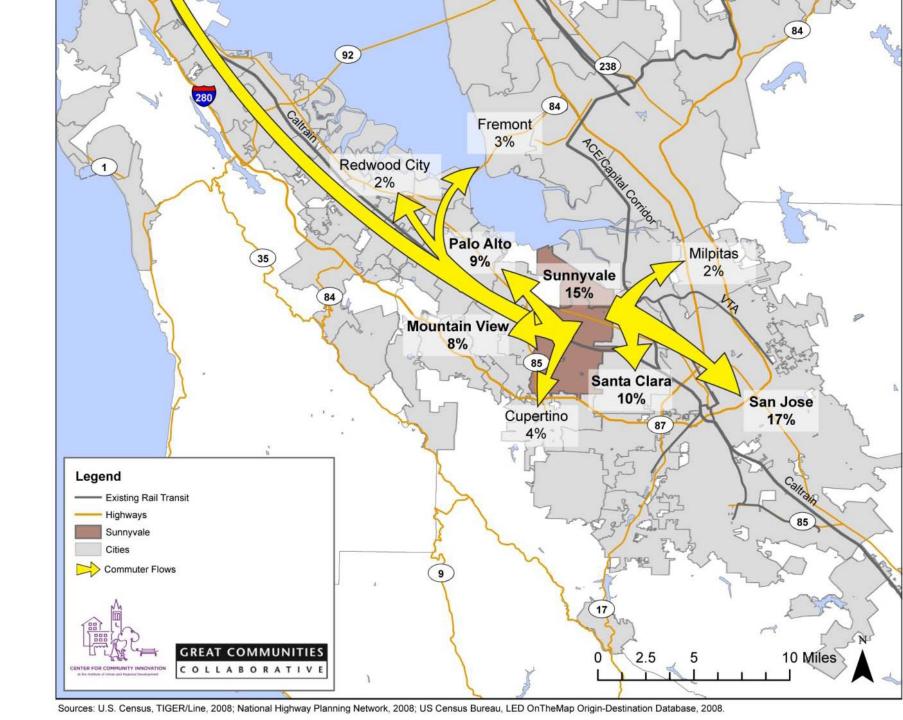
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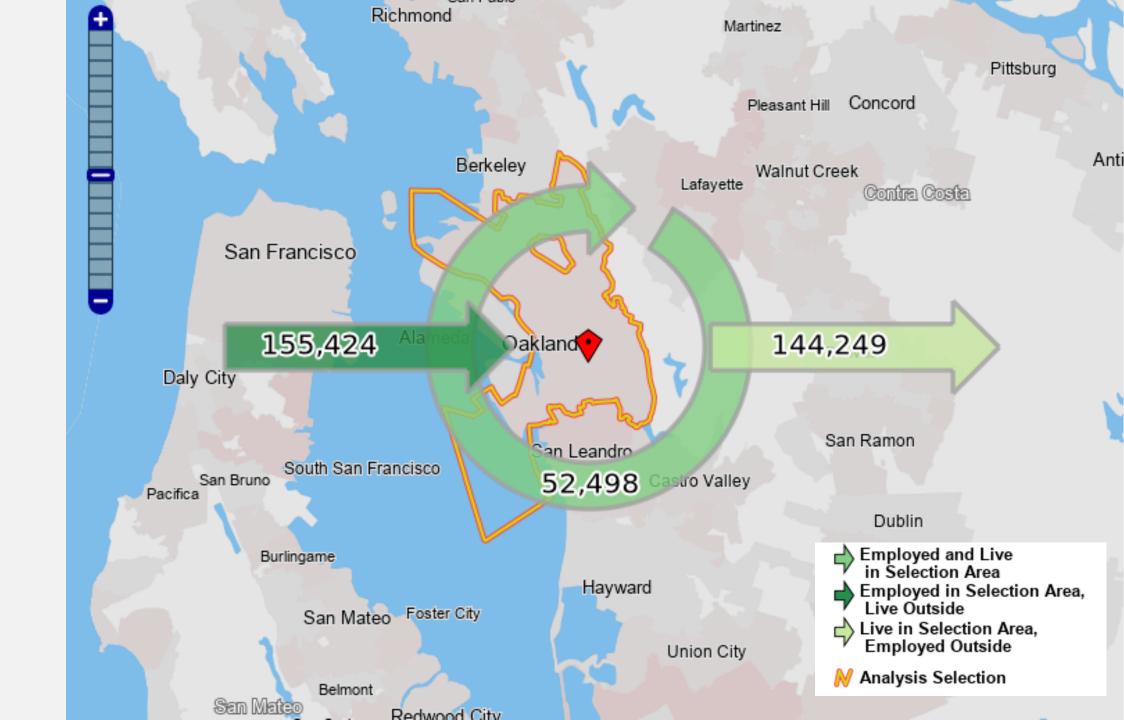
Sources: U.S. Census, TIGER/Line, 2008; National Highway Planning Network, 2008; US Census Bureau, LED OnTheMap Origin-Destination Database, 2008

Where do Sunnyvale residents work?

Do we need housing or office space near the Sunnyvale Caltrain stations?



Oakland, CA Commute Flows



Oakland, CA Commute Flows

Inflow/Outflow Job Counts (All Jobs) 2017

| | Count | Share |
|--|---------|--------|
| Employed in the Selection Area | 207,922 | 100.0% |
| Employed in the Selection Area but Living Outside | 155,424 | 74.8% |
| Employed and Living in the Selection Area | 52,498 | 25.2% |
| | | |
| Living in the Selection Area | 196,747 | 100.0% |
| Living in the Selection Area but Employed Outside | 144,249 | 73.3% |
| Living and Employed in the Selection Area | 52,498 | 26.7% |

OnTheMap Glossary - Report Terms:

Click here for the glossary of Mapping Terms

Note: For job definitions not otherwise specified, the reference period is the 2nd quarter of each calendar year (April-June). Throughout OnTheMap - unless otherwise stated - jobs are defined as 'Beginning of Quarter Employment'. Beginning of Quarter Employment is the total number of workers who were employed by the same employer in both the current (2nd) and previous (1st) quarter.

Total All Jobs A count of all jobs that meet a user's specification of geography, years, and/or labor market segments.

Total Primary Jobs A count of primary jobs that meet a user's specification of geography, years, and/or labor market segments. A primary job is the highest paying job for an individual worker for the year. The count of primary jobs is the same as the count of workers.

Total Private Jobs A count of private-sector jobs that meet a user's specification of geography, years, and/or labor market segments.

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Jobs by Worker Age The categories are Age 30 or younger, Age 31 to 54 years, and Age 55 or older.

Jobs by Earnings The categories are \$1,250 per month or less, \$1,251 to \$3,333 per month, and More than \$3,333 per month.

Jobs by Industry Type (2-digit NAICS) The categories are all 2-digit NAICS codes, otherwise known as industry sectors. See the U.S. Census Bureau's documentation on NAICS for more information on these industry sectors.

Report Settings A section at the bottom of each report summarizing the settings and selection area(s) chosen in the Analysis Settings popup.

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Lab 4 LEHD OnTheMap web