MILRD Virtual Training Projects

Research Staff · Industry Professionals · Graduate Students

VTP OVERVIEW

Large-scale Data Economics + Social Mobility Analysis
(collaboration with Dr. Raj Chetty's Research Group, Harvard University)

Aim

Explore the childhood roots of social mobility at the community level.

Learning Goals

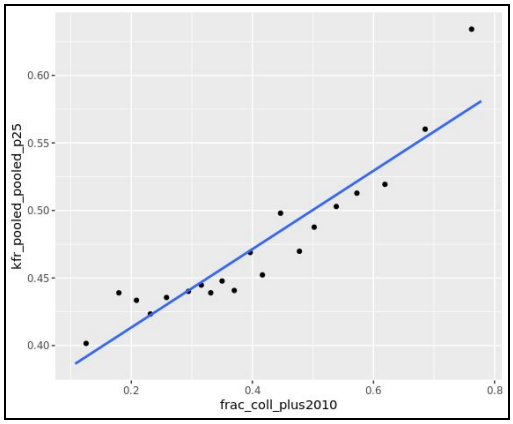
Discussion Topics	*Tasks + Methods*
• Using R for economics research • Social Mobility Study design overview and rationale • Sources and data structures of study input data • Statistical analysis and visualization in R • Regression & Correlation Analysis • Considerations for using this data to inform policy design and interventions	• Summary statistics for assigned locale • Execute assigned correlations • Execute correlations of choice • Plot regressions • Plot binned regressions • Interpretation of results + iteration • Re-execute analysis with locale of choice; compare to initial results

Suggested Preparation

R fundamentals (optional)

Summary

The Opportunity Atlas is the first comprehensive dataset on children's outcomes across neighborhoods in the US. The dataset was built using individual-level data from the US Census Bureau, federal income tax returns and American Community Surveys. It contains data on children's outcomes and parental characteristics for the entire American population from 1989-2015, including 20.5 million children. The project has implications for social and economic policies to promote income mobility.



In this VTP, you'll analyze your own assigned community in the Opportunity Atlas with help from your mentor and in collaboration with your cohort, which can include undergraduates, graduate students, research staff, and industry professionals.

Throughout the week, you'll investigate the power of several variables—such as household income and incarceration rates—to predict social mobility in your assigned city. Using the R statistical programming language and its popular library ggplot2, you'll compute regressions, correlations, and generate histograms, scatterplots and other visualizations. To conclude, you'll conduct a similar analysis on a US city/locale of your choice and compare the results to those from your assigned city.

info@milrd.org

MILRD Virtual Training Projects

Research Staff · Industry Professionals · Graduate Students

Source Data

Chetty et al. *The Opportunity Atlas: Mapping the Childhood Roots of Social Mobility*. NBER. Manuscript on Opportunity Insights. New York Times coverage.

Schedule

Total Effort: ~10 hours

MILRD Provides

- Unlimited support from expert mentors
- Access to all required high-performance cloud-compute resources (AWS), analysis tools and software
- Access to all source data required to complete your project
- Optional Pre-VTP Preparation

Participants Provide

- A computer running Windows or MacOS
- Google Chrome, Safari, Firefox, or Edge
- A stable Internet connection

Sign Up

Review VTP dates and enrollment instructions on our Enrollment & Contact page.

```
#Draw histogram of yvar
ggplot(atlas,aes(x=kfr_pooled_pooled_p25)) + geom_histogram()


# Draw scatter plots with linear fit line
x <- SilverSpring$hhinc_mean2000
y <- SilverSpring$kfr_pooled_pooled_p25
plot(x,y)
abline(lm(y~x))
plot(x, y, main="GraphTitle",xlab="Mean Household Income 2000"
-37 for children with Parents in 25th Pctile")
```