

Low-Income Jobs Loss to COVID-19

Presentation #7

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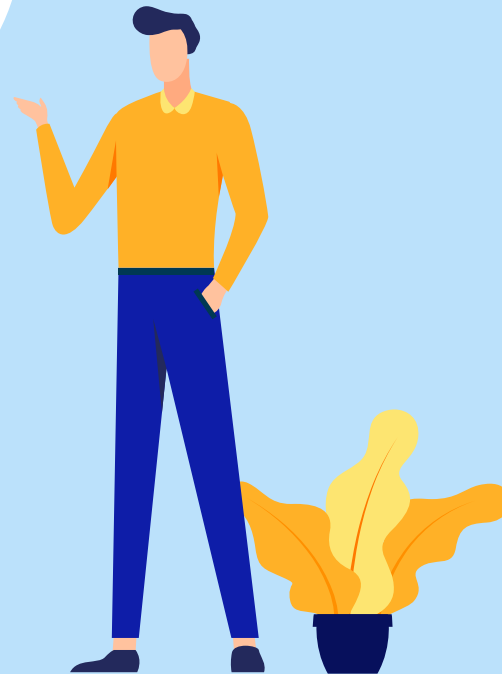
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Next steps

RECAP

Last Week's Presentation:

- Presented Principal Analysis Results & Interpretations
- Went over Final Visualizations for our Variables



OUR PROGRESS

STEP 1

- PCA Final Discussion



- Fixed the incorrect political standing dataset

STEP 2



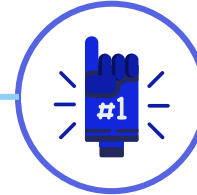
STEP 3

- Started working on our final report



- Working on our GitHub repo

STEP 4





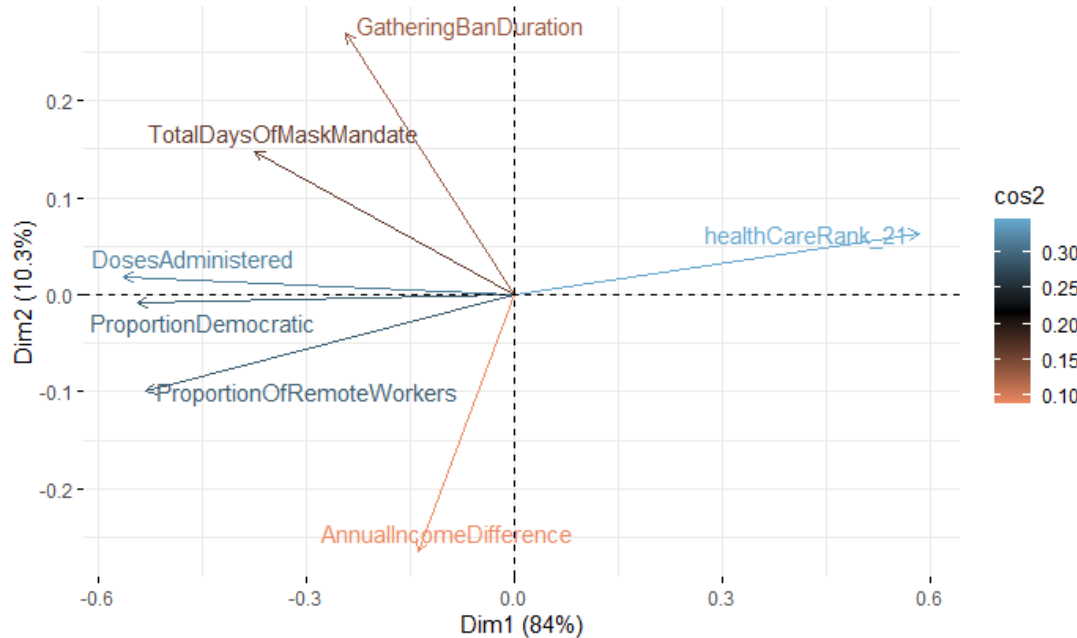
PCA FINAL DISCUSSION

Variables Used

Variable	P-Value	Correlation Coefficient	Relationship With PLIJs Lost
Rate of Vaccination	1.497×10^{-5}	0.57	Moderate & Positive (PLIJs Lost ↑, Rate of Vaccination ↑)
Length of Vaccine Availability	6.24×10^{-6}	0.60	Moderate & Positive (PLIJs Lost ↑, Length of Vaccine Availability ↑)
Length of Masking Requirement	1.929×10^{-7}	0.70	Strong & Positive (PLIJs Lost ↑, Length of Requirements ↑)
Gathering Restrictions (Max Length)	0.0009606	0.45	Moderate & Positive (PLIJs Lost ↑, Length of Gathering Restrictions ↑)
Average Salary (per state, 2021)	0.00113	0.45	Moderate & Positive (PLIJs Lost ↑, Average Salary ↑)
Healthcare Rank (2021)	0.001125	-0.50	Moderate & Negative (PLIJs Lost ↑, Healthcare rank ↓)
Proportion of Republican Voters (2020)	1.934×10^{-10}	-0.75	Strong & Negative (PLIJs Lost ↑, Prop. of Republican Voters ↓)
Rate of Jobs that went Remote	0.04745	0.29	Weak & Positive (PLIJs Lost ↑, Rate of Jobs that went Remote ↑)

PCA Results

Variables - PCA



Component 1:

- t-value = 5.323
- p-value = 0.00000266

Component 2:

- t-value = 2.215
- p-value = 0.0316

Adjusted R-squared = 0.3846

F-stat = 16.62 on 2 and df = 48

p-value = 0.000003273



PLANS FOR FINAL REPORT

Plans

1. Discuss our research question
2. Talk about each dataset we've used:
 - How was the data collected?
 - Why did we use it?
 - Correlation + P-Values
3. Discuss our statistical results:
 - Hypothesis testing
 - Meaningful visuals the showcase the relationships between the variables used
 - PCA
4. Provide final input and conclusion



OUR PROGRESS



1. Pull information on each dataset we've used + identify the sources and gathering methods
2. Put together meaningful visuals for our writeup
3. Put together all the scripts + data we used to GitHub
4. In progress - writing our GitHub README

OUR CHALLENGES

- Describing PCA effectively & creating an answer to finalize reflecting our research question



- Writing a clear paper that reflects our effort this quarter

- Locking down on our visuals and providing the needed context for each

OUR NEXT STEPS



Completing our final
report + final
presentation!

List of References (data)

Variable	Dataset
Length of masking requirement	https://ballotpedia.org/State-level mask requirements in response to the coronavirus (COVID-19) pandemic, 2020-2022
Healthcare rank (2021)	https://www.usnews.com/news/best-states/rankings/health-care
Gathering Restrictions (Max Length)	https://healthdata.gov/dataset/U-S-State-and-Territorial-Gathering-Bans-March-11-/8tfm-md2h/data?no_mobile=true
Rate of Vaccination	https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-total-admin-count-total
Length of Vaccine Availability	https://covid.cdc.gov/covid-data-tracker/#vaccinations_vacc-total-admin-count-total
Rate of Jobs that went Remote	https://www.teamflowhq.com/blog/states-where-the-most-people-worked-remote-because-of-covid-19
Political Standing	https://ballotpedia.org/Election_results,_2020:_State_trifectas_and_the_2020_presidential_vote
Average Salary (per state, 2021)	https://www.statista.com/statistics/243850/private-industry-wages-per-employee-in-the-us-by-state/
Income Tax	https://www.irs.gov/statistics/soi-tax-stats-individual-income-tax-statistics-2020-zip-code-data-soi
Total Income per state (2018 – 2021)	https://apps.bea.gov/iTable/?reqid=70&step=1&acrdn=2#eyJhcHBpZCI6NzAsInN0ZXBlpbMSwyNCwyOSwyNSwzMSwyNiwyNywzMCwzMF0slmRhdGEiOiBllRhYmxlSWQiLCI2MDAiXSxbIkNsYXNzaWZpY2F0aW9uliwiTm9uLUluZHVzdHJ5Il0sWyJNYWpvcl9BcmVhliwiMCIJdFsiU3RhdGUiLFsiMCIJdXSxbIkFyZWEiLFsiWFgiXV0sWyJTdGF0aXN0aWMiLCIxIl0sWyJVbml0X29mX21lYXN1cmUiLCJMZXZlbiHMiXSxbIIIiYXIlFsiMjAyMSIsIjIwMjAiLCIyMDE5IiwiaWJAxOCJdXSxbIIIiYXJlCjZwdpbilsl0xIl0sWyJZZWZyX0VuZCIsIi0xIl1dfQ==
Party Affiliation Proportion (2020)	https://www.pewresearch.org/religion/religious-landscape-study/compare/party-affiliation/by/state/

List of References (articles)

Title	Link
Disentangling policy effects using proxy data: Which shutdown policies affected unemployment during the COVID-19 pandemic?	https://www.sciencedirect.com/science/article/pii/S0047272720301213
Lockdown Without Loss? A Natural Experiment of Net Payoffs from COVID-19 Lockdowns	https://journals.sagepub.com/doi/abs/10.1177/07439156221143954?journalCode=ppoa
Jobs loss to remain high due to slow vaccines, COVID variants: ILO	https://www.aljazeera.com/economy/2021/6/2/job-loss-to-remain-high-due-to-slow-vaccines-covid-variants-ilo

QUESTIONS?

