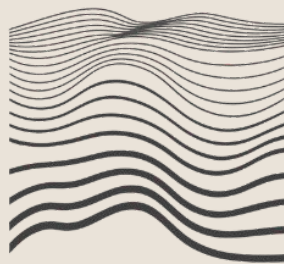# Propensity Score Matching

project by:

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1 Summary

2 Full Deck

Summary

Methodology

Use Propensity Score Matching
- Due to data being observational
- Match treatment + control users on similar propensity scores:
  - *probabilities of receiving treatment*

Pair users:
similar "treated" + "control"

Control   Treatment

causal effect =
treatment group mean
– control group mean

t-test on difference
in work-life balance rating means

Result

The result suggests that there is
no significant causal effect of
working fully remote on work-life balance

✗

Causal
Effect:
-0.16

✗ Not significant

Recommendation

Recommendation:

From the results, **I would not recommend**
that employees choose to work fully remote in order to improve their work-life balance
as there is **not sufficient evidence of its impact.**

notebook link:

Technical Setup

Data

Source: Kaggle

Type: Structured

Features: 19 (demographics, treatment: Remote vs. Onsite/Hybrid)

Target: Work-life balance rating

Setup

Language: R

Packages: tableone, Matching, MatchIt, optmatch, sensitivitymv, ggplot2

Compute: R CPU in Google Colab

Evaluation Metrics

Causal Effect:

- Difference in means of treatment vs. control in matched data
- Also evaluated:
  - Sensitivity, randomization test, two matching types

Click for Full Deck