Simulation Study looking at treatment of cannabis addiction on different age groups

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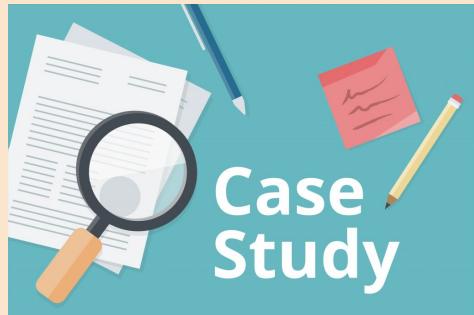
Presentation Overview: Flow and Structure

1) Introduction to the problem
2) Data Generation
3) Methods Employed - Simulation
4) Discussion and Results
5) Conclusion

The Problem

Data Generation

Young Adults	21-30
Middle Age	31-40
Elder	41-50

Using R to set prior distributions with success rates for different treatment methods

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CBT	51%
CBT + MET	81%
Peer Support	86%

Case Study
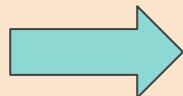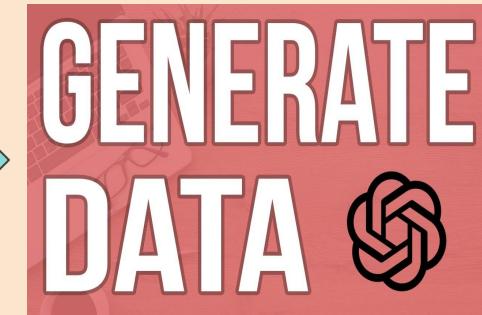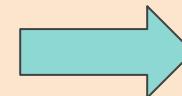
Review research papers and their results to learn about the distribution and percentage of addictions being treated by different methods

GENERATE DATA

Simulating different datasets based off the given distributions

Simulation

CHOOSE THE BEST MODEL

RUN THE CHOSEN MODEL ON DIFFERENT DATA SETS

COMPUTE STATISTICS FOR DIFFERENT DATA SETS

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Confidence intervals for data_ 1 :
                                2.5 %    97.5 %
(Intercept)             1.8869010 2.237165
TreatmentCBT+MET        0.9332489 1.469031
TreatmentPeer Support   1.2537109 1.825049

Confidence intervals for data_ 2 :
                                2.5 %    97.5 %
(Intercept)             1.776538 2.133865
TreatmentCBT+MET        1.098028 1.650751
TreatmentPeer Support   1.429174 2.028671

Confidence intervals for data_ 3 :
                                2.5 %    97.5 %
(Intercept)             1.8919279 2.272187
TreatmentCBT+MET        0.9004007 1.475396
TreatmentPeer Support   1.2689981 1.883782
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Discussion and Results

Coefficients of Model

	Intercept	CBT + MET	Peer Support
Young Adults	5.131	2.460	1.711
Middle Age	2.8059	1.600	1.9608
Elder	1.8211	0.9850	1.3312

For young adults, our model indicates that CBT+MET is more effective
While for the remaining individuals peer support seems to be the most effective.