A/B-Test Autopsy

The hypothesis chosen for reporting is: partial visibility of additional page content (below banner). One of the factors influencing this decision is the assumption that current page design may contribute to users not scrolling, likely due to a full-sized hero banner.

The control segment would see a full-sized banner that covers the entire screen, whereas the treatment group would see a slightly reduced hero banner so that content below it becomes partially visible on the screen.

1- Reasoning: From the other ideas we formulated, we decided to select this idea to experiment as we believe it to have the strongest impact on the chosen metric (scroll-down rate). We believe it to be cost-effective and able to kindle the curiosity of the visitor by making the content partially visible which is a psychological trigger to encourage scrolling. Although the change is simple to design, requiring minimal development effort, it could lead to significant improvement in scroll-down rate with minimal obstruction to visitors.

2- Cost Analysis: The cost of this hypothesis is minimal as it requires a simple design change. The A/B test will run for 18.1 days with a sample size of 646 participants. This is based on existing data showing 35.7 daily visitors. This sample size would be the minimum required number of visitors for a statistically significant result.

3- To increase the sample size or MDE: Given the minimal resources required for development and the short test duration, the potential benefits likely outweigh the costs, especially considering the low risk of failure. We can drive more traffic through Paid Ads as this source has the highest scroll rate, segmenting by traffic source: by running separate experiments for Paid Ads, Organic, and Direct traffic will provide more targeted insights and to focus on CTAs. Since 50% of CTA users scroll, increasing CTA visibility could further boost engagement, provide more data, and improve the MDE.

4- Better Estimation of Ease: To better estimate the ease of doing the hypotheses, we would need to know how the website development is handled. Currently we are assuming that it is an in-house team & the website is completely handled in-house. If the context were different - such as an external agency requiring a quote to make adjustments to the website, then that would strongly affect the estimation.

5- Second Iteration: Seeing significant uplift, we could try different sized banners for different devices to track which sizes are optimal for each screen type. Also changing the content of the first paragraph could affect scroll down rate. Is it anything that’s better than the current?

6- Additional Data: Having data on the device location could help identify regional / international differences in interest for the program. Another important piece of data could be the campaign & visual source of the paid ads, to see whether particular ads might be better performing for Data Analyst track on this metric. Noticing that 50% of users who downloaded the syllabus also scrolled down, we would like to track this ratio across different versions to see if it changes.

Reference:
Sample size and duration calculation: **Sample_Size_Calculator.ipynb**