# Does Google prefer websites with AdSense advertising?

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## Introduction

Online advertising is now integral to digital marketing, with SEO crucial for improving web visibility. As traditional marketing loses its edge, companies must build an online presence to stay competitive (Seymen, 2017).
Google AdSense, a dominant platform, allows sites to monetize through targeted ads, raising the question: does Google favor AdSense sites in its search rankings?

This study explores potential links between AdSense integration and higher search rankings. While not establishing causality, it aims to highlight patterns in search rankings and provide insights into how Google's advertising model impacts visibility.

## Research Questions and Expected Results

**The main research question is:**

Is there a statistically significant relationship between AdSense integration and search engine rankings on Google?
This question examines whether AdSense ads influence a website's ranking in Google search results, offering insights into factors that affect search rankings:

Google    Bing

## Procedure for Developing the Algorithm

To explore how Google AdSense impacts search rankings, the system will analyze website code to detect AdSense ads. The system, developed in Python, will identify AdSense ads on websites by analyzing their HTML using web scraping and parsing techniques. Data from the first 20 search results will be provided by RAT, and the algorithm will then identify ads and their types. The same process will be repeated for Bing to compare results across search engines.

### Technical Considerations
The key technical aspect is HTML parsing to analyze the code and detect ad units. This will involve web scraping techniques and the use of libraries like BeautifulSoup. Additionally, the system must detect dynamically generated ads, a task best suited for tools like Selenium rather than pure web scraping.

### Development Environment & Libraries
The algorithm will be developed using Python with BeautifulSoup for HTML parsing, Requests for fetching content, and Scrapy for more complex scraping tasks. Selenium will be employed to handle dynamic content such as Google AdSense ads. These libraries provide the foundation for developing the ad detection system.

### Requirements
The algorithm must:
- Analyze web queries provided by RAT.
- Scrape HTML and detect AdSense ads.
- Save and prioritize results for machine learning and further analysis.
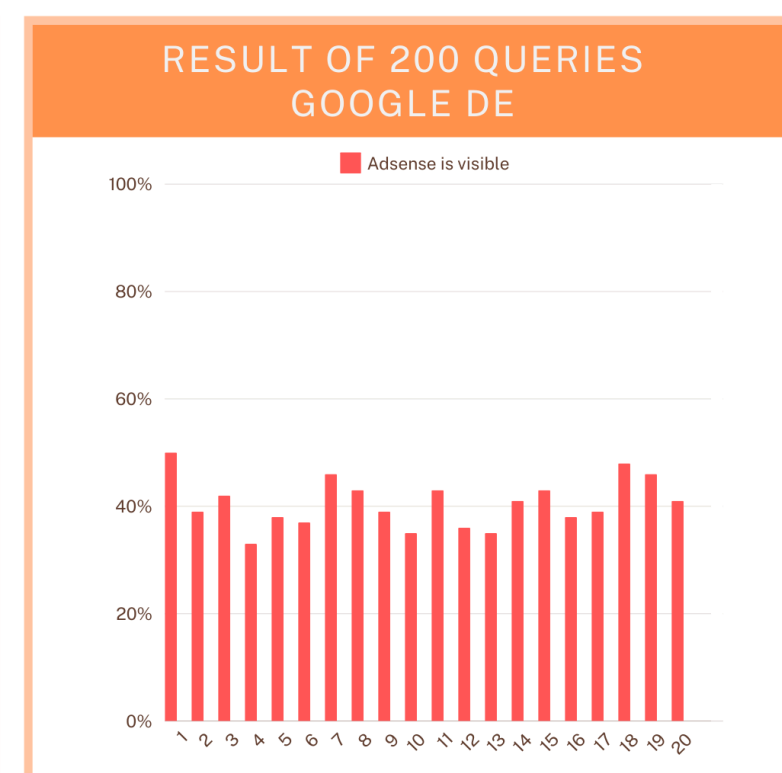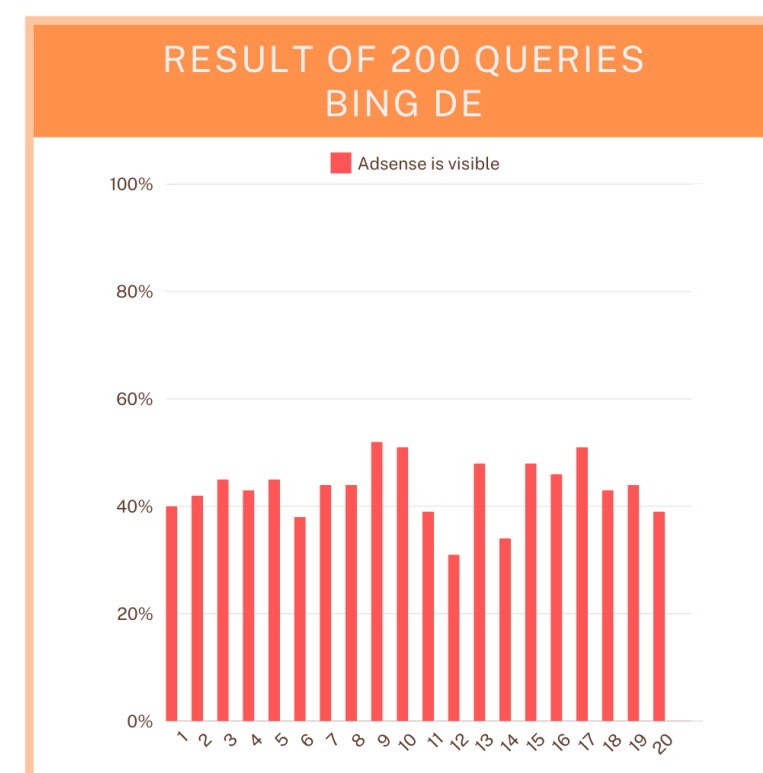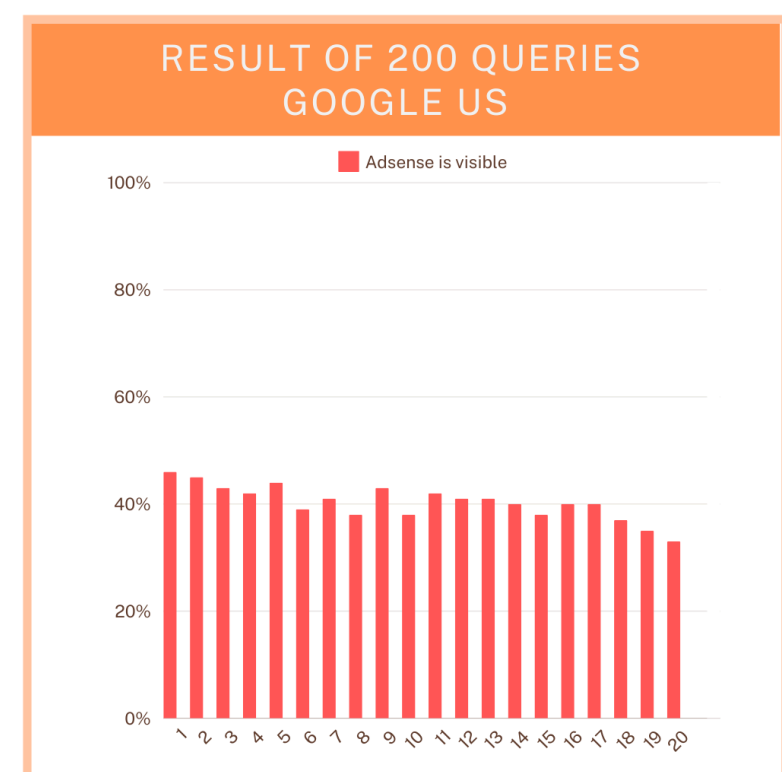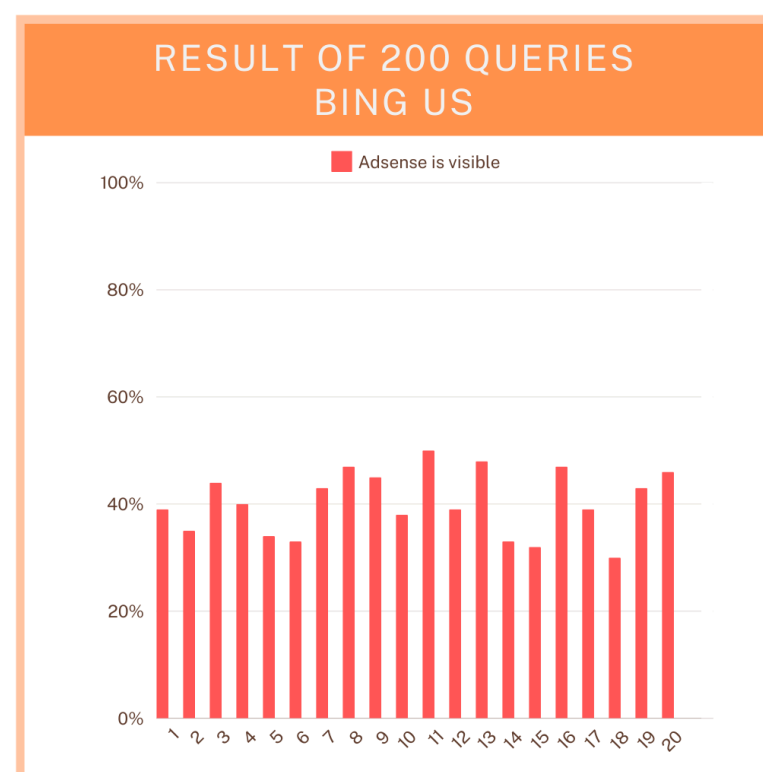- Summarize and rank URLs based on ad detection, identifying how many include AdSense.

Assumptions:
- Search results will not repeat.
- Each HTML ad code is unique.

### Algorithm Development Process
Development will proceed in Visual Studio, utilizing insights from websites known to integrate AdSense. Initially, web scraping via BeautifulSoup was used, but it failed to detect AdSense ads due to their dynamic nature. The shift to Selenium allowed for real-time interaction with website content, enabling the detection of dynamically generated ads. This approach will ensure the system can accurately capture and analyze AdSense ads, aligning with the thesis objective.

## Results



RESULT OF 200 QUERIES BING US — Adsense is visible



RESULT OF 200 QUERIES GOOGLE US — Adsense is visible



RESULT OF 200 QUERIES BING DE — Adsense is visible



RESULT OF 200 QUERIES GOOGLE DE — Adsense is visible

## Analysis of Results

**Bing Search Engine**
Bing results show no clear correlation between AdSense integration and higher rankings. The absence of a linear decline in visibility suggests that factors like relevance, website quality, SEO, and user behavior play more significant roles than AdSense in Bing's ranking system.

**Google Search Engine**
Google DE shows no consistent pattern linking AdSense to rankings. However, in Google US, there is a modest linear decline in visibility, suggesting that AdSense plays a more noticeable role in ranking, though it is not the primary factor. Regional differences, SEO, and relevance also influence rankings significantly.
In conclusion, while AdSense may have some influence, it does not guarantee higher rankings in either Bing or Google, with other factors being more impactful.

## Conclusion

The study shows that AdSense's influence on search rankings varies by search engine and region. In Bing DE and Google DE, AdSense is not a major ranking factor, with other elements like relevance and website quality playing more significant roles. In contrast, Google US displays a more defined pattern, but AdSense alone is insufficient to guarantee higher rankings.

Insights from ICETSEM-2018 further emphasize that Google's frequent algorithm updates and factors such as links, relevance, and engagement greatly impact rankings. Ultimately, while AdSense has some regional influence, website ranking is determined by multiple factors beyond just ads**.**

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