Vidyalankar Institute of Technology Accredited A+ by NAAC	**DEPARTMENT OF COMPUTER ENGINEERING**

Assignment 3

Semester	B.E. Semester VIII – Computer Engineering
Subject	Social Media Analytics
Subject Professor In-charge	Prof. Amit Alyani
Academic Year	2024-25

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Title: Analysing the hyperlink structure of medium.com

Concepts:

1. Introduction Hyperlinks play a crucial role in determining a website's SEO performance and online visibility. This report analyzes the hyperlink structure of **Medium.com**, focusing on outbound and inbound links. The analysis was conducted using Python, leveraging `BeautifulSoup` for web scraping and `SerpAPI` for extracting backlinks from Google Search.

2. Methodology

2.1 Extracting Outbound Links

- The `requests` library was used to fetch Medium's homepage.

- `BeautifulSoup` parsed the HTML to extract all `<a>` tags with valid `href` attributes.

- The extracted URLs were filtered to include only external (outbound) links.

2.2 Extracting Inbound Links

- The **Google Search API (SerpAPI)** was used to find web pages linking to Medium.

- Search queries were crafted using keywords like "AI," "Blockchain," and "Cybersecurity."

- Results provided a list of external websites linking back to Medium.

3. Findings

3.1 Outbound Links Medium contains numerous outbound links, including:

- External references to research articles, news, and other platforms.

- Social media links (Twitter, LinkedIn, etc.).

- Affiliate or sponsored content links.

3.2 Inbound Links

- High-authority domains (e.g., news sites, academic blogs) frequently link to Medium.

- Articles on Medium are often referenced in discussions on AI, Web3, and technology-related forums.

- Some backlinks originate from Medium's own social media promotions.

4. SEO and Social Media Impact

4.1 SEO Benefits

- **Strong inbound links** improve Medium's **domain authority**, boosting rankings in search engines.

- **Relevant outbound links** help in **contextual SEO**, improving credibility.

- **Frequent indexing** due to high inbound linking ensures Medium remains discoverable in search results.

4.2 Social Media Influence

- Medium's external links encourage content distribution, increasing social shares.

- High inbound linking from forums and blogs enhances its **engagement and reach**.

- The combination of backlinks and social media promotions boosts referral traffic.

5. Conclusion The hyperlink structure of Medium.com is well-optimized for SEO and social media influence. The site benefits from authoritative inbound links while maintaining a strategic outbound linking approach. These factors collectively enhance its **search visibility, credibility, and user engagement**.

Implementation:

```python
import requests
from bs4 import BeautifulSoup
from urllib.parse import urlparse

website = "https://medium.com/"
response = requests.get(website)
soup = BeautifulSoup(response.text, "html.parser")

# Extracting outbound links
outbound_links = set()
for link in soup.find_all("a", href=True):
    parsed_url = urlparse(link["href"])
    if parsed_url.netloc and parsed_url.netloc != urlparse(website).netloc:
        outbound_links.add(link["href"])

print("Outbound Links:")
for link in outbound_links:
    print(link)
```

```
Outbound Links:
https://medium.statuspage.io
https://policy.medium.com/medium-privacy-policy-f03bf92035c9
https://blog.medium.com
https://speechify.com/medium
https://policy.medium.com/medium-terms-of-service-9db0094a1e0f
https://help.medium.com/hc/en-us
```

```python
from serpapi import GoogleSearch

API_KEY = "dc244db8d69264b4ce40b1b97a93394ccf607c9501ed99b9e2b2e40466bdc788"

topics = ["AI", "Blockchain", "Cybersecurity", "Climate Change", "Web3"]

for topic in topics:
    query = f'"medium.com" {topic} -site:medium.com'

    params = {
        "q": query,
        "api_key": API_KEY
    }

    search = GoogleSearch(params)
    results = search.get_dict()

    print(f"\n🔍 Searching for Medium articles on: {topic}\n")

    for result in results.get("organic_results", []):
        print(result["link"])
```

🔍 Searching for Medium articles on: AI

https://www.reddit.com/r/Medium/comments/1bu58pc/ai_flooding_medium/
https://seo.ai/blog/medium-com-is-saying-no-ai-content
https://teaching.virginia.edu/collections/furthering-your-knowledge-of-ai/200
https://news.ycombinator.com/item?id=41721082
https://linda.substack.com/p/medium-bans-ai-content-from-payment/comments
```