

Smart Fan Share of Voice (SoV) Analyzer

KSSSN Tejaswini — ME21B092

GitHub Repository: github.com/Tejaswini170104/atomberg_asg

Overview

This AI agent analyzes Atomberg's Share of Voice across Google and YouTube search results for keywords related to smart fans. It computes brand-wise SoV using four metrics:

- Mentions
- Engagement (likes)
- Sentiment (via VADER)
- Semantic Dominance (novel NLP-based metric)

Tech Stack and Tools

- **Python:** Core programming language
- **SerpAPI:** For retrieving Google search results
- **YouTube Data API v3:** For fetching video titles, descriptions, and stats
- **VADER Sentiment:** For brand-level sentiment scoring
- **Entropy-based Filtering:** To dynamically choose the number of relevant results
- **Jupyter Notebook:** For building, iterating, and visualizing outputs
- **Matplotlib, Pandas:** For displaying results and formatting tables

Key Functions

- `google_search()`, `youtube_search()`: API-driven search result fetchers
- `calculate_entropy()`, `determine_n()`: Decide how many results to consider
- `count_mentions()`, `sentiment_scores()`, `semantic_dominance()`, `get_engagement()`: Metric calculators
- `compute_sov()`: Combines all scores using weighted average

Supplementary Code: See complete implementation in the notebook at:
github.com/Tejaswini170104/atomberg_asg

Share of Voice (SoV) Analysis

Brands Tracked: Atomberg, Orient, Havells, Crompton, Usha

Keywords Analyzed: “smart fan”, “BLDC fan”, “remote ceiling fan”, “voice controlled fan”, “best energy efficient fan”

Keyword	Atomberg	Orient	Havells	Crompton	Usha
Smart fan	60.78%	15.50%	5.00%	13.72%	5.00%
BLDC fan	40.93%	20.36%	18.03%	15.68%	5.00%
Remote ceiling fan	37.17%	20.19%	12.65%	5.00%	5.00%
Voice controlled fan	47.22%	15.95%	26.83%	5.00%	5.00%
Best energy efficient fan	30.24%	23.86%	19.06%	21.83%	5.00%

Insights & Recommendations

- **“Smart Fan” Leadership:** Atomberg dominates this keyword with 60.78% SoV. *Action:* Reinforce this lead through targeted search ads and SEO.
- **“BLDC Fan” – Competitive Heat:** Atomberg is ahead but trailed closely by Orient and Havells. *Action:* Invest in education-focused campaigns explaining Atomberg’s BLDC advantage.
- **“Remote Ceiling Fan” – Untapped Opportunity:** Atomberg leads but with low total SoV. *Action:* Launch remote-first content series to claim remaining share.
- **“Voice Controlled Fan” – At Risk:** Havells is catching up in smart home integrations. *Action:* Highlight Atomberg’s compatibility with Alexa/Google Assistant in titles and tags.
- **“Best Energy Efficient Fan” – Crowded Field:** Atomberg holds just 30%. *Action:* Create UGC-driven campaigns featuring electricity savings and real testimonials.

Ongoing Monitoring: This framework can be automated to track SoV trends monthly and help adapt digital strategy in real-time.