Page 1 — Tech Stack & Architecture

Goal: Measure Share of Voice (SoV) for Atomberg on search platforms. This template reflects the YouTube-first build.

Tech Stack:
- Language: Python 3.10+
- APIs: YouTube Data API v3
- NLP: VADER sentiment (NLTK)
- Data: pandas
- Orchestration: CLI pipeline
- Optional extensions: Transformers for sentiment; Google CSE/SerpAPI; X API; Instagram Graph API

Key Design Choices:
- Official APIs where possible for stability and TOS compliance.
- Engagement-weighted SoV metric: log-scaled function of views, likes, comments.
- Share of Positive Voice (SPV) from sentiment-labeled comments that mention each brand.

How to Run:
1) pip install -r requirements.txt
2) python -c "import nltk; nltk.download('vader_lexicon')"
3) Fill .env with YOUTUBE_API_KEY
4) python src/main.py --keywords-file data/keywords.txt --top-n 30 --days 365

Artifacts:
- reports/exports/posts.csv
- reports/exports/brand_comments.csv
- reports/exports/sov.csv
- reports/exports/spv.csv
- reports/insights.md

Page 2 — Findings & Recommendations (Fill After Running)

Findings Snapshot (auto from CSVs):
- Top Brands by SoV:
[paste top rows from sov.csv]
- Share of Positive Voice:
[paste SPV table from spv.csv]

Observations:
- [e.g., Atomberg dominates 'BLDC fan' but trails on 'smart ceiling fan']
- [e.g., Channel types where Atomberg over-indexes]
- [e.g., Content formats that drive positive sentiment]

Recommendations for Content & Marketing:
1) Double down on keywords with high SPV but moderate SoV to cheaply gain share.
2) Create content targeting queries where competitors lead in SoV but have low SPV.
3) Engage in the comments on videos with neutral sentiment to tip them positive.
4) Partner with top channels discovered in posts.csv that index for your audience.

Next Steps:
- Add Google Search via Google CSE or SerpAPI.
- Add X via official API (or approved data provider).
- Compare SoV across platforms and over time (weekly job).