Proposed Tech Stack

1. Scraping (Daily/Real-Time):

- Python with Scrapy
- Background jobs with **Celery + Redis** (used in previous project)
- For real-time: AWS Lambda or background worker pattern

2. Storage and Querying:

- PostgreSQL with Django ORM
- MongoDB or Elasticsearch for unstructured data
- **ChromaDB + sentence-transformers** for semantic search (already used in a financial analysis tool)
- S3 for media and document storage

3. Analysis (Conflict Indicators):

- GPT-4 via OpenAI API for summarization and pattern detection
- **LangChain + Transformers** for multi-step reasoning or chaining LLMs with structured data
- NLP stack includes `spaCy`, `scikit-learn`, `transformers`, and custom classifiers

4. Dashboards and Alerts:

- Frontend with React
- Real-time updates via Django Channels & WebSockets (used in current project)
- Alerts via email, Slack, or Telegram (integrated using `requests`, `python-dotenv`, etc.)