



PulsarWave

PulsarWave

Clear Stories, Captivatingly Told

Team Idea

PulsarWave: An ML and NLP-powered tool for highlighting key trends/insight in news feeds data.



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<https://lablab.ai/event/google-vertex-ai-hackathon/pulsarwave>

<https://github.com/sikkha/PulsarWave>





PulsarWave

PulsarWave – Solve the real world problem.

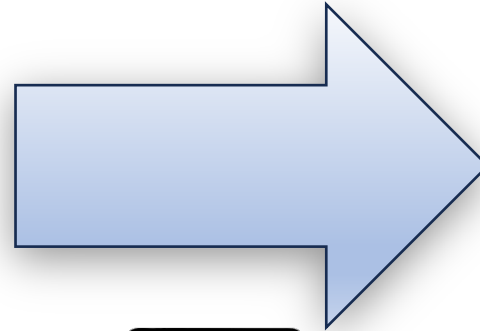
Everything takes time, Time is Valuable.



Information overload

- Newsfeed
- Social Media
- Influencers
- Products
- Services
- Useless Information
- Distractions
- Ads
- Etc.

Before



PulsarWave

+

AI Powered

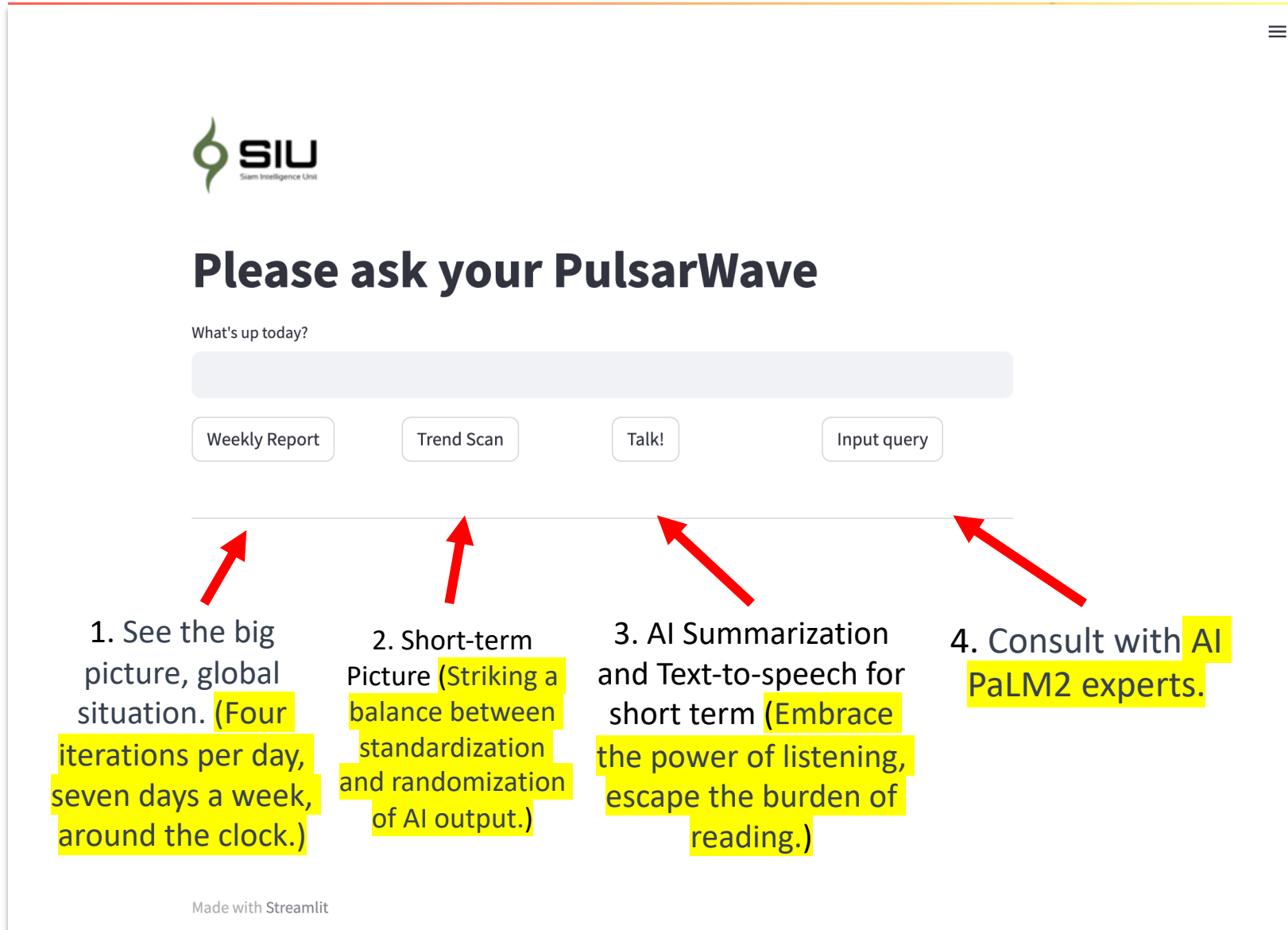


After

<http://34.27.92.51:8501/>



PulsarWave



The screenshot shows the PulsarWave web application interface. At the top left is the SIU logo. Below it is the heading "Please ask your PulsarWave". Underneath is a text input field with the placeholder "What's up today?". Below the input field are four buttons: "Weekly Report", "Trend Scan", "Talk!", and "Input query". Below the buttons is a horizontal line with four red arrows pointing to it. Below each arrow is a numbered step: 1. See the big picture, global situation. (Four iterations per day, seven days a week, around the clock.) 2. Short-term Picture (Striking a balance between standardization and randomization of AI output.) 3. AI Summarization and Text-to-speech for short term (Embrace the power of listening, escape the burden of reading.) 4. Consult with AI PaLM2 experts. At the bottom left of the interface, it says "Made with Streamlit".

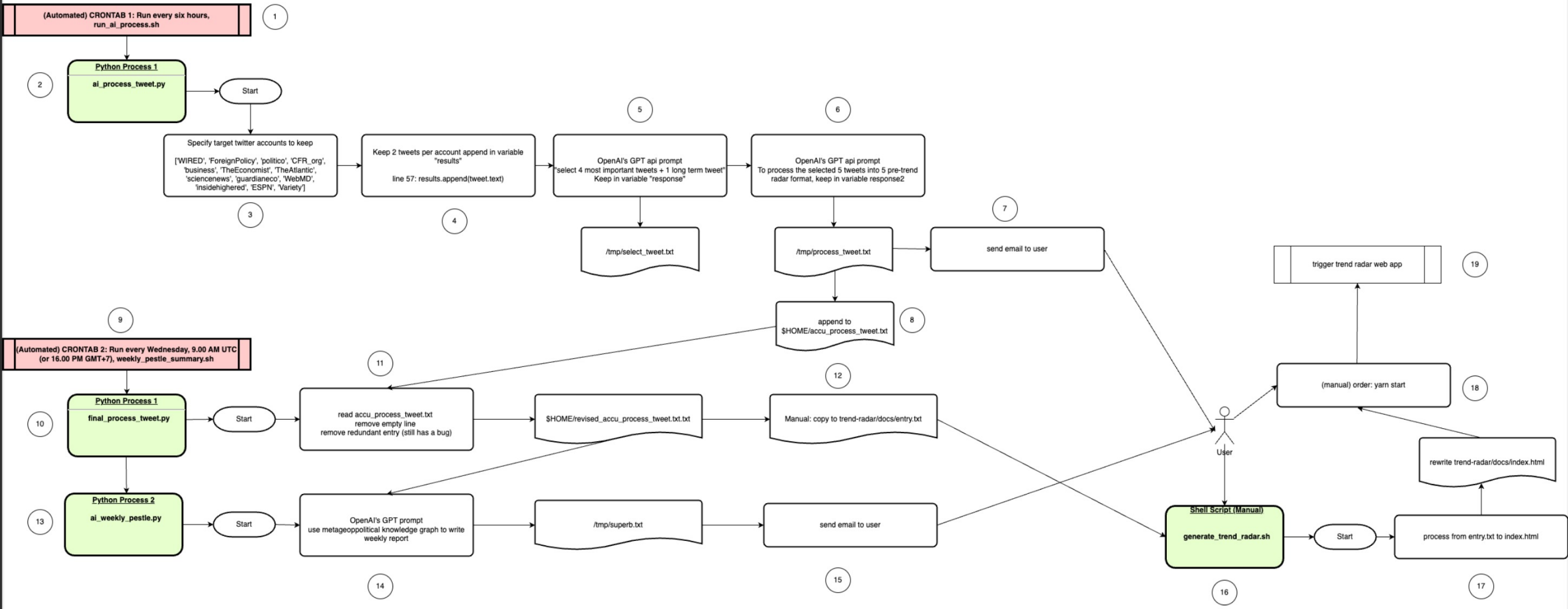
Prototype + Concept

See the demo in the video clip

<http://34.27.92.51:8501/>



Technical Execution





PulsarWave

Make the thing **Precise**



Strategies to Achieve Optimal Performance:

A: Prompt Engineering - This involves crafting precise instructions to guide the AI's output.

B: Temperature Setting - We balance between encouraging creativity and ensuring fact-checking by optimizing this setting.

C: Verification with Multiple AIs - We cross-verify results using various AI engines to ensure accuracy and depth.

D: Verification with Credible Online Sources - Our process includes automated cross-checking of information with reliable, up-to-date online sources via Pinecone vector database.

E: Fine-Tuning - We make use of specific data in certain areas to enhance the AI's training and improve its accuracy in those domains.

User Type	Recommended Method(s)	Efficiency	Constrained Cost	Hypothetical Real-life Example
1) General Users	B	60%	Low	Casual Q&A chatbot
				- Answering general knowledge questions
2) Business Users	A+D	88%	Medium-High	News Summarization
				- Generating summaries of news articles
3) Rigorous Academic Research Users	C+D	90%	High	Legal document analysis
				- Analyzing contracts and case law
4) Highly Sensitive Policy Users (i.e., geopolitics analysis)	A+C+D+E	99%	Extremely High	Geopolitical risk assessment
				- Analyzing and forecasting risks in international relations

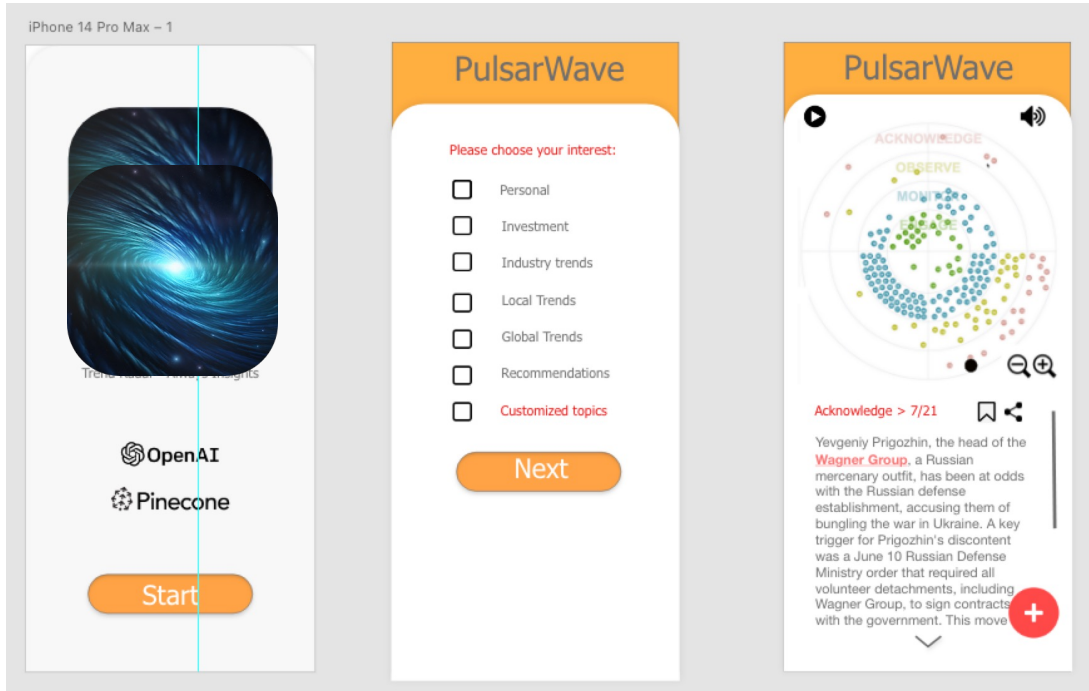
AI grading:

- GPT-4: A
- Claude: A-
- Bard: B+
- GPT-3.5: B

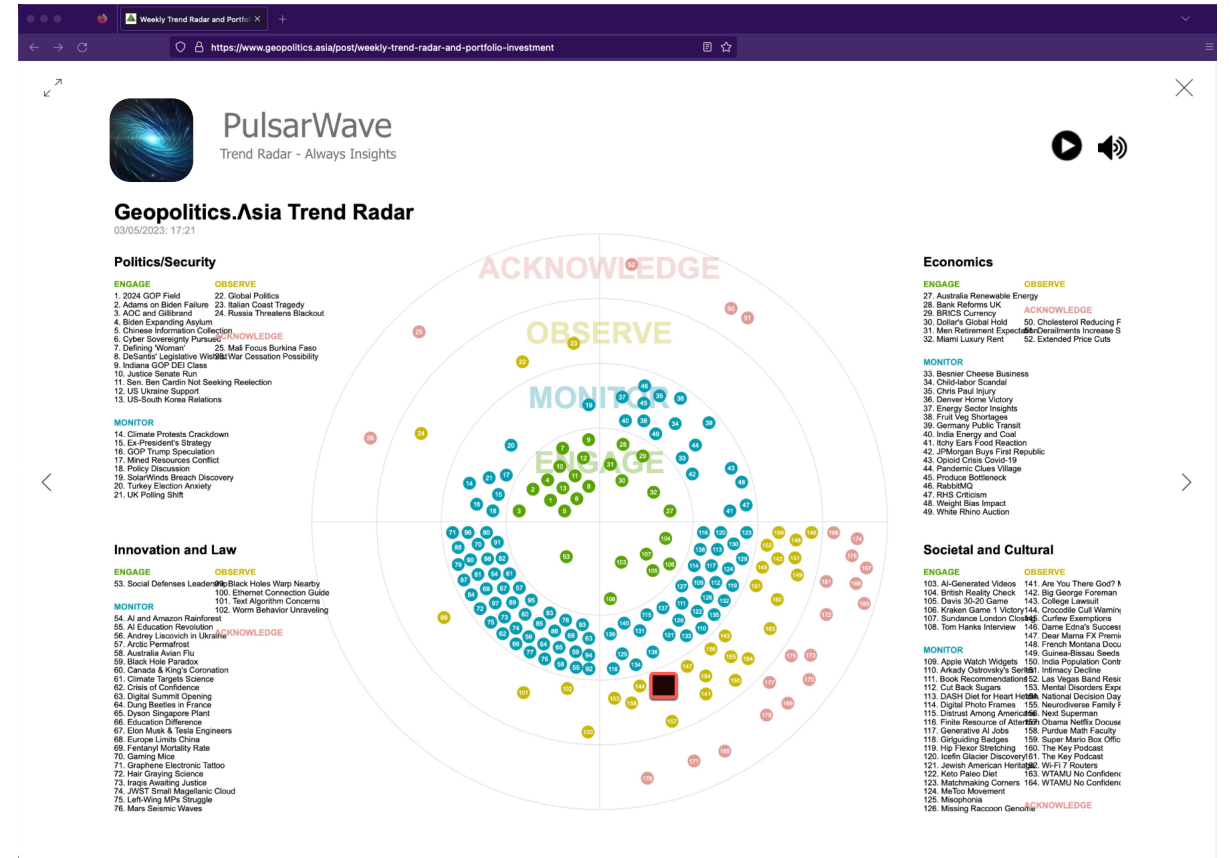


PulsarWave

User Experience – Next milestone



Mobile App



Web with more community features



Overview - Clear Stories, Captivatingly Told



Product Overview PulsarWave, the Automated Trend Monitoring Radar (TMR), is an innovative technology that employs advanced Machine Learning (ML) algorithms to distill valuable insights from the vast amounts of data gathered from news feeds. Built on the principle of a posteriori knowledge, PulsarWave extracts new knowledge and insights through processing and analysis of empirical data. Its key technology, Natural Language Processing (NLP), allows the system to interpret and understand text-based data, thereby identifying and tracking emerging trends in the fast-paced world of digital media.



Distinctive Features Unlike traditional "social listening" tools, PulsarWave focuses on the quality of information, not merely its popularity or frequency. It aims to highlight substantial news items that indicate significant shifts in the current landscape, be it political, social, or economic. The system prioritizes importance and relevance, ensuring that users receive the most pertinent news based on their interests or business needs.



Product Lifecycle PulsarWave is currently in the growth stage of its product lifecycle. After successful deployment and testing, it is demonstrating its value and gaining traction in the marketplace. The plan is to continue improving and refining the technology, expanding its features based on user feedback, market trends, and technological advancements.



Intellectual Property Rights While the Trend Monitoring Radar has been modified from Zalando's public Tech Radar, PulsarWave has proprietary elements (if applicable) that enhance its unique value proposition and provide a competitive edge. (Further details on IP, patents, trademarks, etc.)



Research and Development We have a dedicated research and development team that focuses on further enhancing PulsarWave's capabilities. We're exploring various ways to refine the system's ML algorithms for better trend detection and sentiment analysis. Furthermore, we are investigating potential integrations with other data sources and platforms to extend the reach and impact of PulsarWave.



Applications PulsarWave can be deployed in various applications, such as portfolio management, providing valuable insights for portfolio investment. It can also generate materials for daily news analysis and power AI discussions in a simulated podcast radio format. The tool is invaluable for strategic planning and decision-making processes in companies, early disease detection in public health, and understanding public sentiment for policymakers.



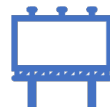
Creating a sustainable business model is an important part of your platform's strategy. Here are a few ways you might consider monetizing PulsarWave and the entrepreneurial platform:



Subscription: After the one-year free usage, you could introduce a subscription fee for continued access to PulsarWave's advanced features. The subscription could be tiered, with basic features available for free and more advanced features available at higher tiers.



Premium Services: Offer value-added services such as personalized trend analysis reports, advanced analytics, priority access to new features, or additional storage.



Advertising: With a large user base, you could generate revenue through advertising. You could offer ad placements within your platform or even sponsored content.



Commissions: If your platform facilitates deals or transactions, you could take a commission from these. For example, if you have a marketplace for services, you could take a cut from each transaction.



Partnerships: Partner with other businesses that want to reach your user base. This could include partnerships with educational institutions for certified courses, tech companies for special offers on tools or services that entrepreneurs might need, or even media companies for premium content.



Data Monetization: With a large user base, you will be collecting a wealth of data. While respecting privacy laws and ethical considerations, you could use this data to provide market research services.



Consulting services: Based on the insights generated by PulsarWave, you could provide consulting services to businesses, governments, or organizations.



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Future Potential

- **Social Media**
 - At the core of PulsarWave's ecosystem is a vibrant social media platform designed for thinkers, analysts, and trend-spotters. This digital space provides a platform for sharing insights, discussing trends, and collectively analyzing global events. As users engage with PulsarWave's AI-generated trend reports, they can share their thoughts, build upon each other's ideas, and create a knowledge-rich environment that fosters deep understanding and forward-thinking strategies.
- **Content Creation and Sharing (Medium-like platform)**
 - Beyond social interaction, the PulsarWave ecosystem provides tools for content creation and sharing, much like the Medium platform. Users can author their own articles, analyses, and thought pieces, contributing to a rich library of user-generated content. This content can then be shared within the PulsarWave community or externally, fostering knowledge exchange and thought leadership.
- **Entrepreneur Exchange Hub**
 - The Entrepreneur Exchange Hub is another unique feature of the PulsarWave ecosystem. Here, users can exchange services, collaborate on projects, and establish partnerships. Whether it's a startup seeking a market analyst, a consultant offering strategy development services, or a group of innovators looking for a venue to brainstorm and launch their venture, the Hub serves as a vibrant marketplace and collaborative space.
- **Integration with Third-Party News Analysis**
 - To supplement the insights generated by PulsarWave, the platform integrates third-party news analysis, ensuring users have a comprehensive view of the trends that matter most. It is a one-stop-shop for understanding the pulse of the world, bringing together AI-driven insights and expert analyses from a variety of sources.
- **Own Media Network**
 - In the future, we envision PulsarWave establishing its own media network. This network would distribute content generated by PulsarWave's AI, user-generated articles, and collaborative works from the Entrepreneur Exchange Hub. It would serve as a trusted source of news, analysis, and thought leadership, further amplifying the value of the PulsarWave community.



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Expected potential Market size



Overview of the potential market size for each of the services incorporated in the PulsarWave:

1.AI-Driven Trend Monitoring and Analysis: The AI market is expected to grow to \$190.61 billion by 2025, according to MarketsandMarkets. A significant portion of this market is likely to be captured by AI-driven analytics services like PulsarWave, which can provide critical insights for businesses and organizations across sectors.

2.Social Media Platform for Thinkers, Analysts, and Trend-Spotters: The global social networking market size was valued at \$85.16 billion in 2020 and is expected to expand at a compound annual growth rate (CAGR) of 25.4% from 2021 to 2028, according to Grand View Research. A niche platform like PulsarWave catering to specific professional communities could potentially capture a reasonable slice of this market.

3.Content Creation and Sharing (Medium-like platform): The global online content creation market is expanding, driven by an increasing number of businesses and individuals creating content for marketing, thought leadership, and knowledge sharing. This trend is likely to continue as more businesses and individuals recognize the value of content marketing and thought leadership.

4.Entrepreneur Exchange Hub: The gig economy and freelancer market is growing. In the U.S. alone, it's predicted that freelancers will make up a majority of the country's workforce by 2027. A hub for entrepreneurs to exchange services could potentially tap into this growing market.

5.Integration with Third-Party News Analysis: As per the Global Newswire, the News Syndicate Market size was estimated at \$11.61 billion in 2020 and is expected to hit \$14.83 billion by 2027. This suggests a growing demand for consolidated and easily accessible news and analysis.

6.Own Media Network: According to Statista, the global digital advertising market is projected to reach \$398 billion in 2021, a figure that PulsarWave's own media network could tap into through ad revenues.



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SWOT + Risk factors



Strengths:

- 1. Innovation:** PulsarWave employs AI, ML, and NLP technologies, which are cutting-edge tools in the field of data analysis and trend prediction. This technological advantage can help PulsarWave to stay ahead of the competition.
- 2. Comprehensive Services:** The combination of social media, content creation, entrepreneurial exchange hub, and AI-driven analytics offers a wide range of services, making PulsarWave a one-stop solution for many users.
- 3. Potential for High User Engagement:** The idea of a social media platform dedicated to thinkers and analysts is unique and can attract a loyal user base that can drive high engagement levels.
- 4. Versatility:** PulsarWave's applicability across sectors such as public health, policymaking, marketing, and investment gives it a wide target market.

Weaknesses:

- 1. Complexity:** The wide range of services could potentially confuse users, particularly those who are not very tech-savvy.
- 2. Resource Intensive:** Developing, maintaining, and improving an AI-driven platform with so many features could require significant resources.
- 3. Dependency on User Data:** For AI and ML models to work efficiently, they need access to vast amounts of data. Convincing users to share this data could be a challenge due to privacy concerns.

Opportunities:

- 1. Growing Market:** The market for AI, ML, content creation, and social networking services is growing, which bodes well for PulsarWave's potential for growth.
- 2. Demand for Personalized and In-depth Analysis:** In an era of information overload, there's a demand for tools that can provide personalized, relevant, and in-depth analysis. PulsarWave has the potential to fill this gap.
- 3. Partnerships:** There could be opportunities to collaborate with other businesses, such as news agencies, research institutions, and think tanks.

Threats:

- 1. Competition:** While PulsarWave has unique aspects, it's operating in fields (like social networking and AI-driven analysis) where there are already established players.
- 2. Privacy and Data Security Concerns:** As PulsarWave would be handling user data, it must address potential privacy concerns and ensure robust data security measures to avoid breaches.
- 3. Regulatory Changes:** Changes in laws relating to data privacy, AI, and social networking can impact PulsarWave's business operations.

Risk Factors:

- 1. Technological Risk:** As PulsarWave is heavily dependent on technology, any technological failure can pose a significant risk.
- 2. Data Security Risk:** Breaches in data security can damage PulsarWave's reputation and lead to legal consequences.
- 3. Market Acceptance Risk:** There is always a risk that the market may not accept or adapt to the platform as expected.
- 4. Compliance Risk:** PulsarWave must comply with a variety of laws and regulations across regions. Non-compliance can lead to legal issues and reputational damage.



Revenue Model



Scenario 1: Flat Rate Subscription

A simple model where users pay a flat monthly fee for complete access to all features and services on PulsarWave.

- Individual Users: \$9.99/month
- Business Users (small to medium businesses): \$49.99/month
- Enterprise Users (large businesses or institutions): Custom pricing based on the size and needs of the enterprise.

Scenario 2: Tiered Subscription

In this model, services are divided into different tiers, and users choose the tier that best suits their needs.

- Basic Tier (access to social networking, content creation): \$4.99/month
- Intermediate Tier (basic + access to trend monitoring radar, some AI functionalities): \$14.99/month
- Advanced Tier (access to all features including full AI capabilities, entrepreneurial exchange hub): \$24.99/month

Scenario 3: Freemium Model

In this model, basic services are offered for free, while advanced features require a paid subscription.

- Free (social networking, content creation): \$0/month
- Premium (access to trend monitoring radar, AI capabilities, entrepreneurial exchange hub): \$19.99/month

Scenario 4: Pay-per-use Model

Instead of a monthly subscription, users can pay for the specific services they use. This could be a good option for occasional users or those who only need specific features.



Revenue Model - Conservative Forecasting



Year	Model 1(\$)	Model 2(\$)	Model 3(\$)	Model 4(\$)
1	500,000	250,000	150,000	200,000
2	1,000,000	500,000	300,000	400,000
3	1,500,000	750,000	450,000	600,000
4	2,000,000	1,000,000	600,000	800,000
5	2,500,000	1,250,000	750,000	1,000,000
Total	7,500,000	3,750,000	2,250,000	3,000,000

Conservative Staff Headcounts

Year	Research & Development	Marketing & Sales	Operations & Support	Total
1	5 (Engineers, Data scientists)	3 (Marketers, Sales reps)	2 (Customer support reps, Operations manager)	10
2	7 (Additional Product managers)	4 (Additional Business development reps)	3 (Additional Customer support reps)	14
3	9 (Additional UX/UI designers)	6 (Additional Marketing analysts, Sales reps)	5 (Additional Operations staff, IT support)	20
4	11 (Additional Engineers, Data scientists)	8 (Additional Business development reps)	7 (Additional Customer support reps)	26
5	13 (Additional Product managers, UX/UI designers)	10 (Additional Marketing analysts, Sales reps)	9 (Additional Operations staff, IT support)	32



Revenue Model - Optimistic Forcasting - Hypergrowth Financial Evaluation

Year	Revenue (\$ million)	Net Profit (\$ million)
1	10	2
2	50	10
3	250	50
4	500	150
5	1000	400

Hypergrowth Staff Headcounts

Year	Development	Marketing	Operations	Sales	Management	Total
1	50	20	15	10	5	100
2	100	40	30	20	10	200
3	200	80	60	40	20	400
4	400	160	120	80	40	800
5	500	200	150	100	50	1000



Potential Acquisition



Year	Acquisition Target	Type	Reason	Estimated Cost	Remarks
2024	AI Startup Specializing in NLP	Technological	To improve the AI and NLP capabilities of PulsarWave, making it more accurate and efficient	\$5M-\$10M	Due diligence will be crucial to assess the compatibility and potential of the startup's technology
2025	Social Listening Tool	Business Practice	To acquire an established user base and integrate their practices to enhance PulsarWave	\$15M-\$20M	Thorough assessment of user base and retention rates will be required
2026	Cybersecurity Firm	Technological	To strengthen the security measures of PulsarWave, ensuring data privacy	\$10M-\$15M	The reputation and track record of the firm will be important factors
2027	Data Analytics Company	Both	To enhance the data analysis capabilities of PulsarWave and acquire experienced data scientists	\$20M-\$25M	The value and impact of the company's existing data models and algorithms should be assessed
2028	Media Network	Business Practice	To establish a direct source of information for PulsarWave and control over news dissemination	\$30M-\$40M	Careful evaluation of the network's reach, reputation, and potential for integration is necessary



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Thank You

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