

CogniSum

Agentic Book Summarization

Transforming Static Text into Interactive Knowledge
with FastAPI & Streamlit



The Challenge: Information Overload

- ⚠ **Time Constraints:** Professionals and students struggle to keep up with the volume of required reading.
- ⚠ **Low Retention:** Passive reading of static text often leads to poor information retention.
- ⚠ **Language Barriers:** Valuable knowledge is often locked behind language and accessibility walls.



Agentic AI Architecture



Core Intelligence

Uses **Facebook's BART model** for high-quality abstractive summarization of dense texts.



Agentic Enrichment

GROQ & Tavily Agents scan the live web to validate facts and add contemporary context.



Multi-Modal Access

Powered by **Sarvam AI** for seamless regional translation and natural audio synthesis.

Platform Capabilities



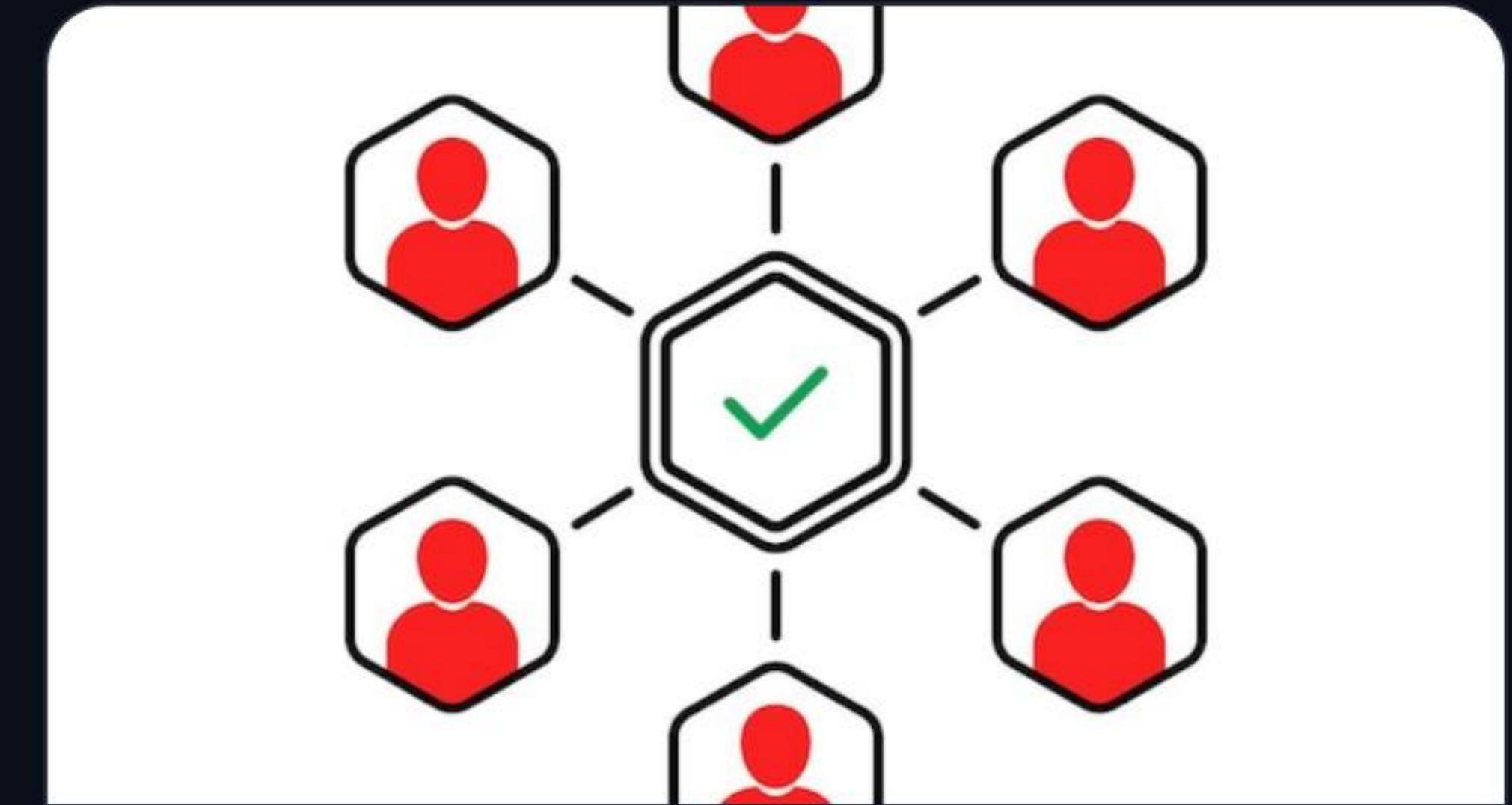
Interactive Dashboard

Role-based access
(User/Admin) with clean
Streamlit UI.



Knowledge Graphs

Visualize complex entity
relationships within the book.

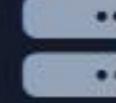
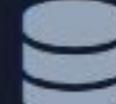


Collaborative Space

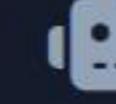
Real-time drawing, note-
sharing, and peer review.

High-Performance Tech Stack

Application Layer

-  **Frontend:** Streamlit (Rapid UI)
-  **Backend:** FastAPI (Async/High Speed)
-  **Database:** PostgreSQL (Reliable Storage)

Intelligence Layer

-  **Summarizer:** Facebook BART
-  **Inference:** GROQ API (LPU Inference)
-  **Search Agent:** Tavily API

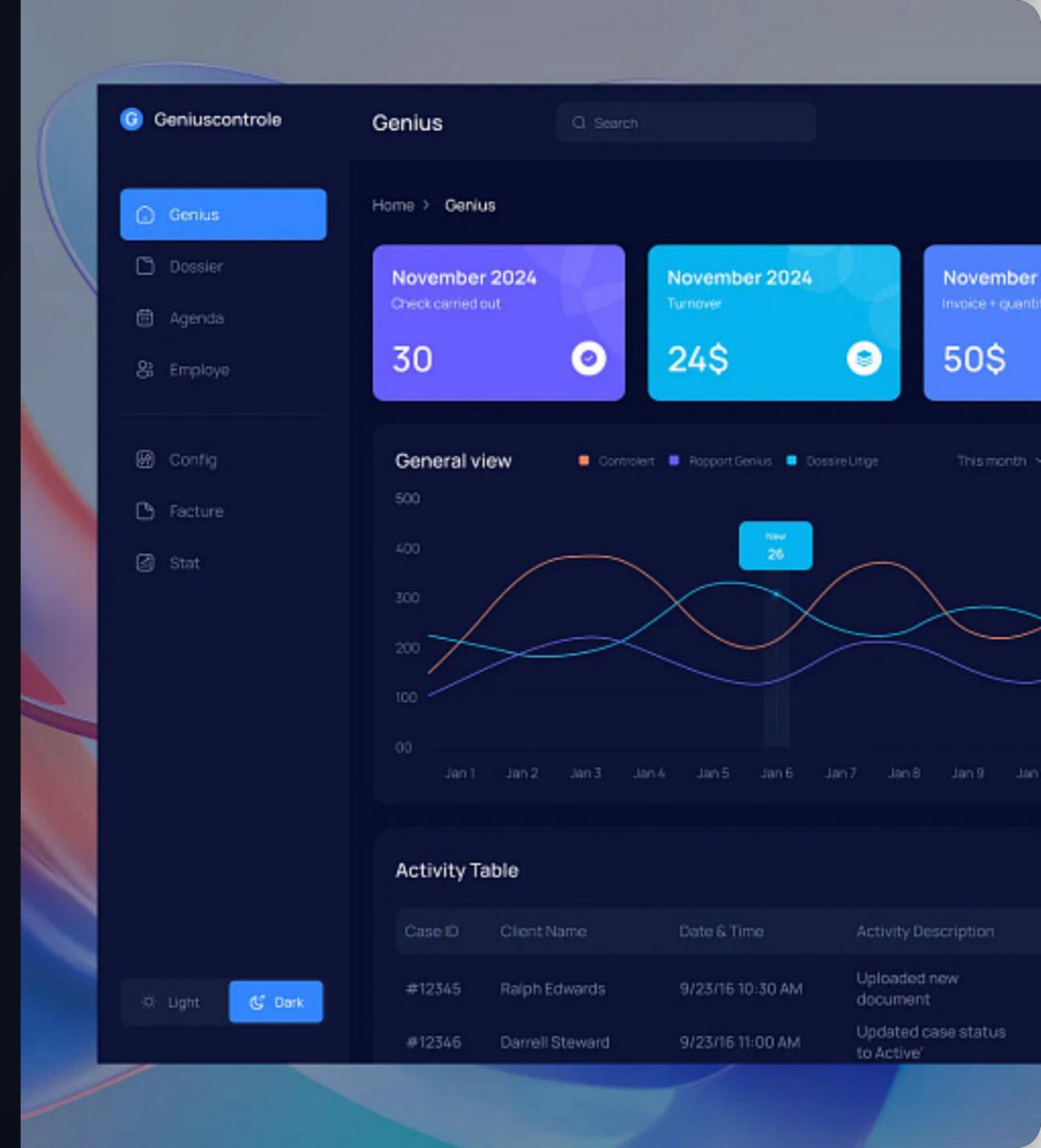
Admin & Analytics

A robust control center ensures system integrity and cost management.

🛡️ Secure User Management

🔗 Real-time API Usage Tracking

📄 Content Moderation Logs



Bridging the Gap Between Reading and Knowing

"Now, the demo team will walk you through the live
execution of our project."

Image Sources



https://img.freepik.com/premium-vector/little-boy-overwhelmed-with-homework-sitting-sad-school-desk-with-books-textbooks-depressed-pupil-tired-learning-cartoon-flat-illustration_341509-1467.jpg

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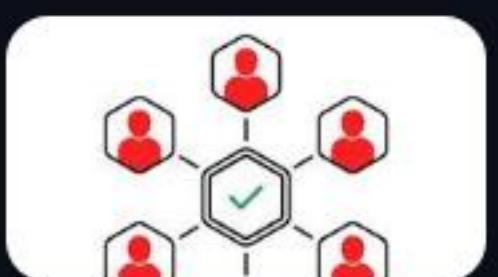
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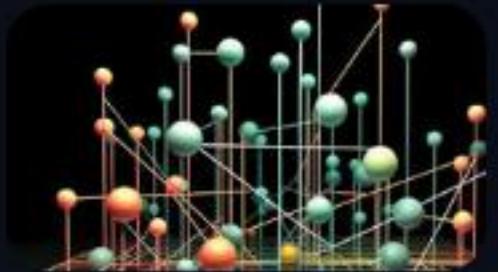
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