

# CogniSum

An abstract background graphic featuring a perspective grid on a dark surface. Numerous spheres of varying sizes and colors (teal, orange, yellow) are connected by thin, translucent lines, creating a complex, interconnected network that resembles a molecular structure or a data visualization.

## 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.

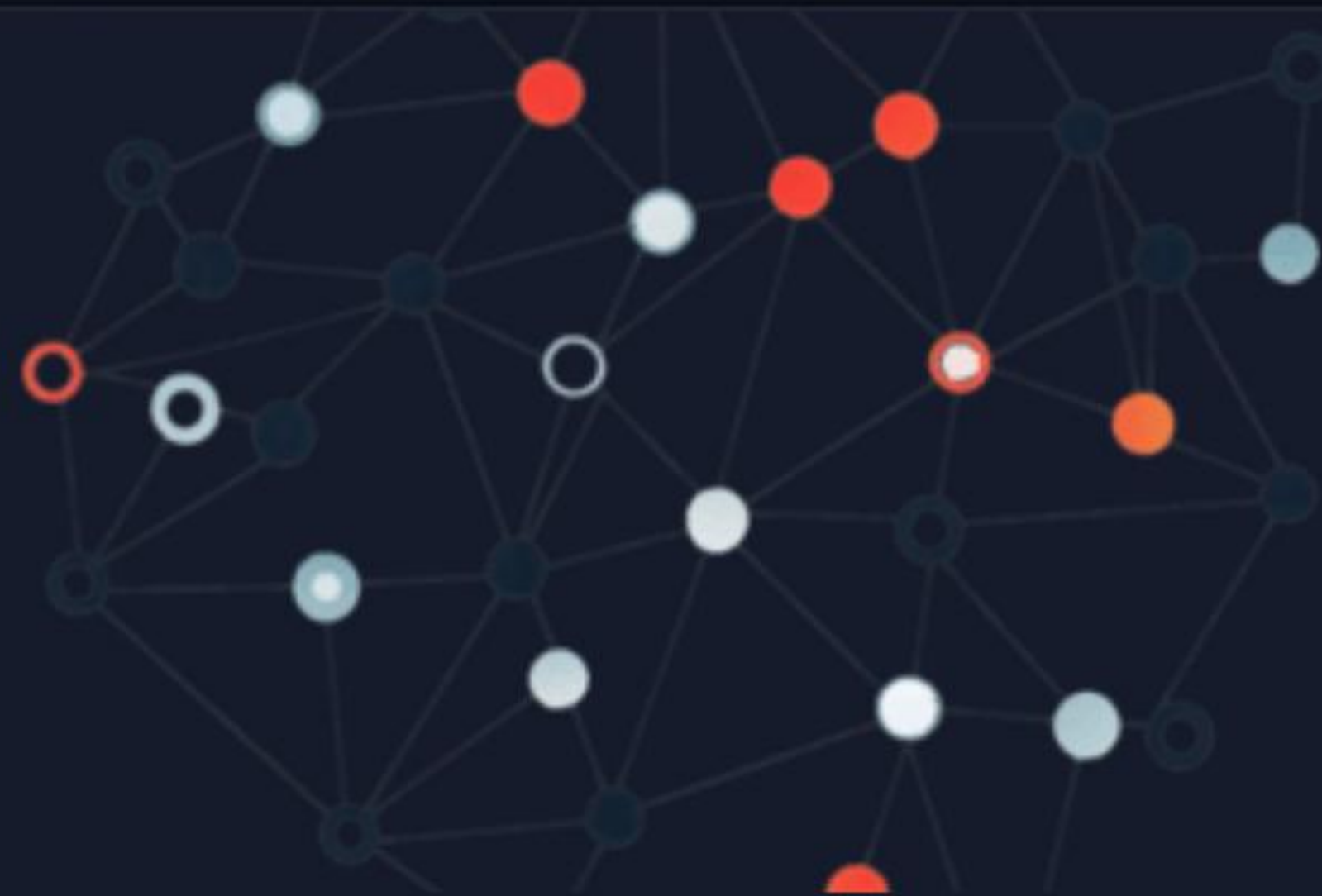


# | Platform Capabilities



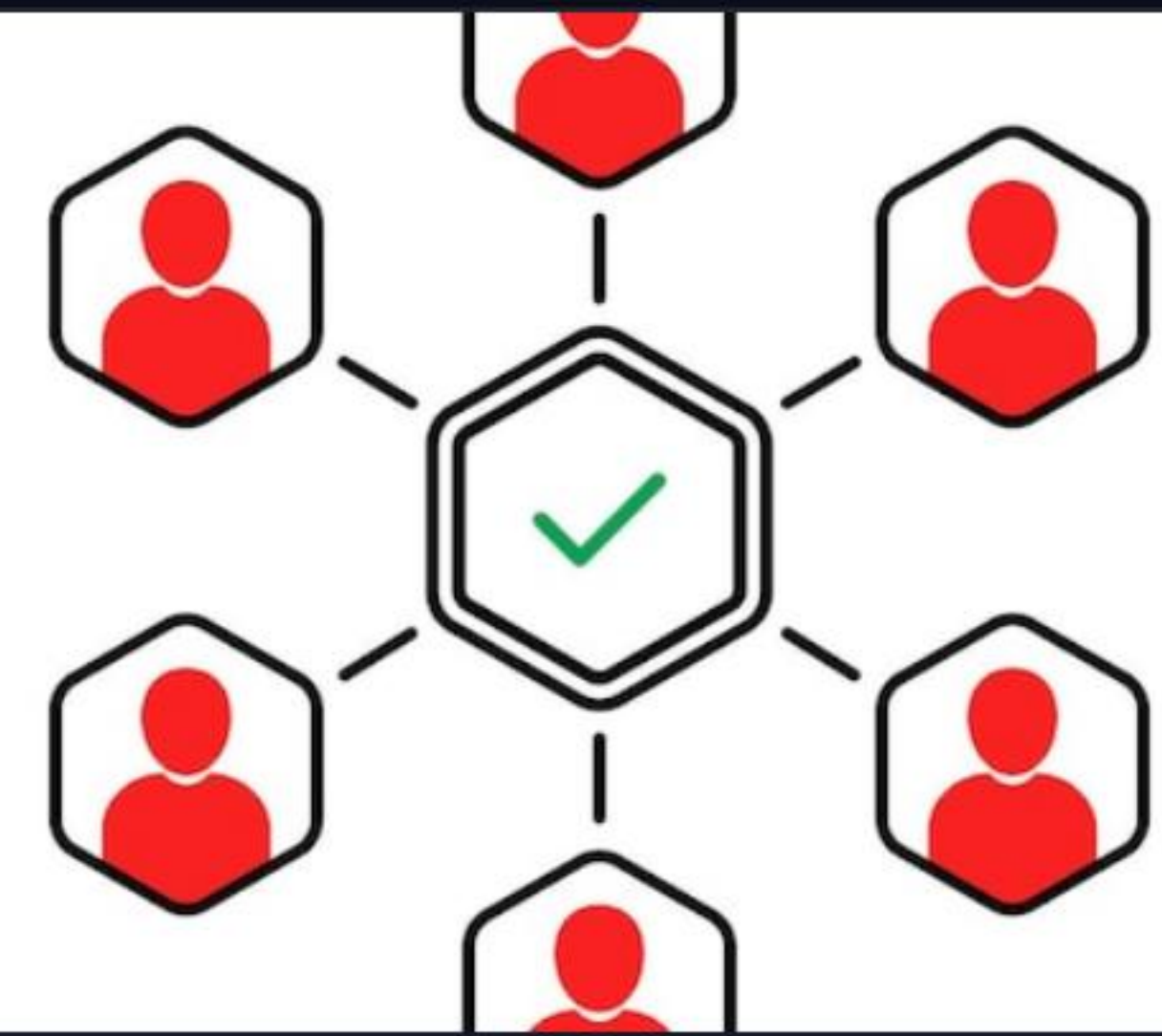
## Interactive Dashboard

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



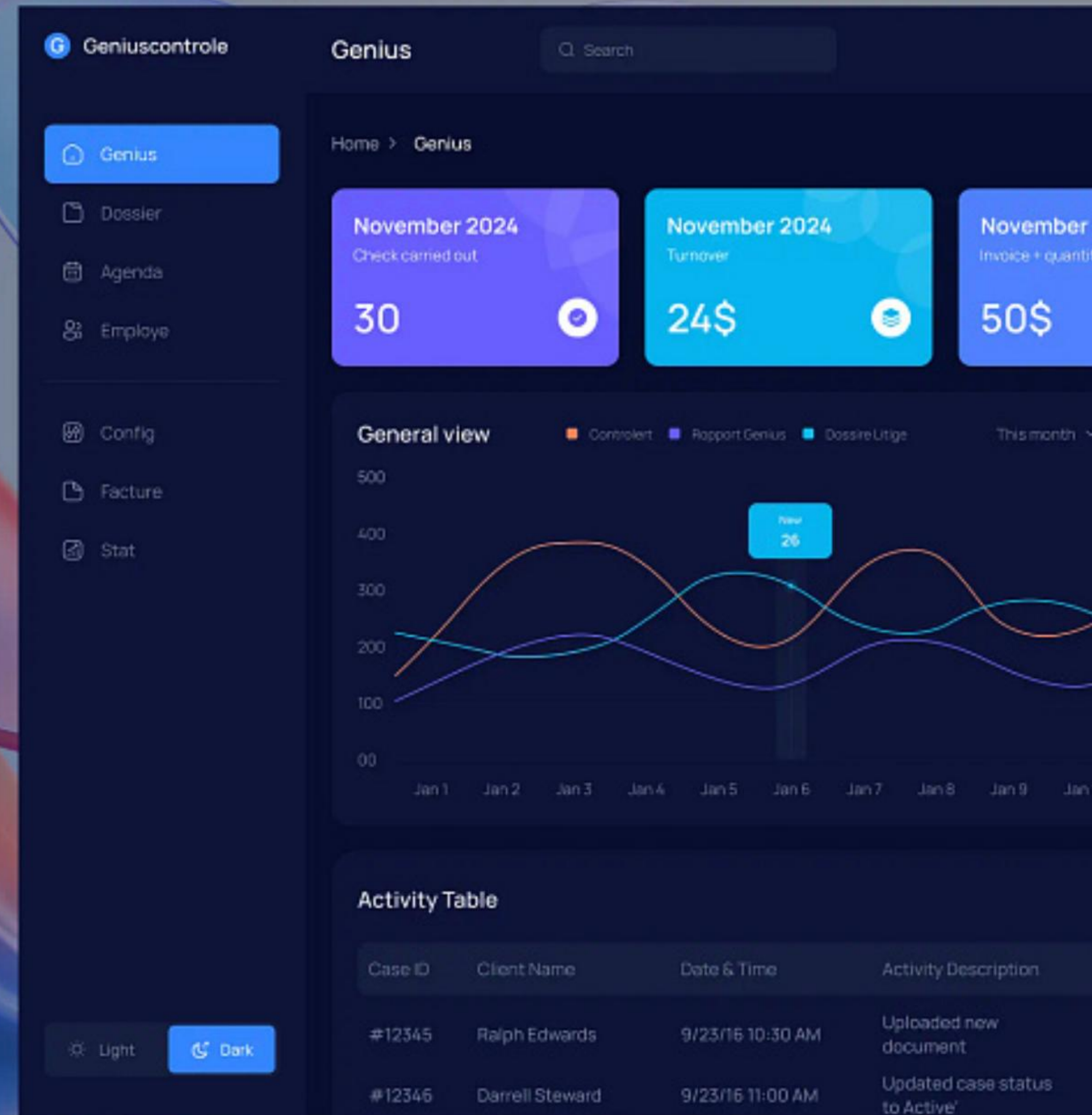
# Admin & Analytics

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

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"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](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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Source: [www.vecteezy.com](https://www.vecteezy.com)

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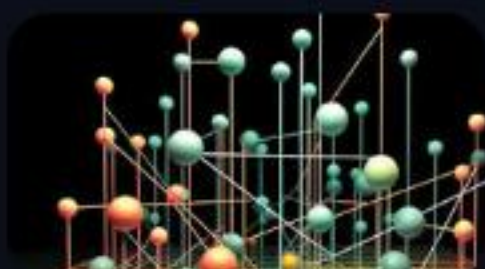
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