

Abstract

This project demonstrates a practical implementation of AI text-to-video generation technology for educational content creation. This prototype serves as a proof-of-concept for integrating advanced AI video generation into educational contexts, demonstrating how text prompts can transform into historically accurate visual reconstructions with pedagogical value.

Educational Applications

- Reduces cost and production time for specialized visualizations
- Enables representation of niche historical topics
- Provides consistent quality across educational materials
- Supports rapid iteration based on curriculum requirements
- Makes complex concepts more accessible to visual learners and students with reading difficulties

Technical Specifications

- HTML5/CSS3/JavaScript implementation with cross-browser compatibility
- Custom video playback system with accessible controls
- Responsive design for various devices
- LocalStorage integration for user session management
- Modular architecture supporting future extensions

Related Works

- [1] A. Han *et al.*, "Teachers, Parents, and Students' perspectives on Integrating Generative AI into Elementary Literacy Education," May 2024, doi: <https://doi.org/10.1145/3613904.3642438>.
- [2] Y. Liu, H. Awang, and N. Mansor, "To Explore Sora's Potential Influence on Future Education," *International Journal of Multidisciplinary and Current Educational Research (IJM CER)*, 2024. Accessed: Mar. 20, 2025. [Online]. Available: https://www.ijmcer.com/wp-content/uploads/2024/09/IJM CER_K065098105.pdf
- [3] C. Tarchi, S. Zaccoletti, and L. Mason, "Learning from Text, Video, or Subtitles: A Comparative Analysis," *Computers & Education*, vol. 160, Jan. 2021, doi: <https://doi.org/10.1016/j.compedu.2020.104034>.
- [4] L. Yonggang, H. Awang, and N. Suhaili Mansor, "TO EXPLORE AI SORA POSSIBLEMULTI-DIMENSIONALINFLUENCESON THE FUTUREEDUCATION INDUSTRY, SHORT-VIDEO INDUSTRY, FILM INDUSTRY AND ROBOTICS INDUSTRY," *International Journal of Advanced Research*, vol. 12, no. 12, pp. 47–60, Dec. 2024, doi: <https://doi.org/10.21474/ijar01/19996>.
- [5] J. E. Prather *et al.*, "The Robots are Here: Navigating the Generative AI Revolution in Computing Education," *arXiv (Cornell University)*, Oct. 2023, doi: <https://doi.org/10.1145/3623762.3633499>.

Gallery & Playback Interface

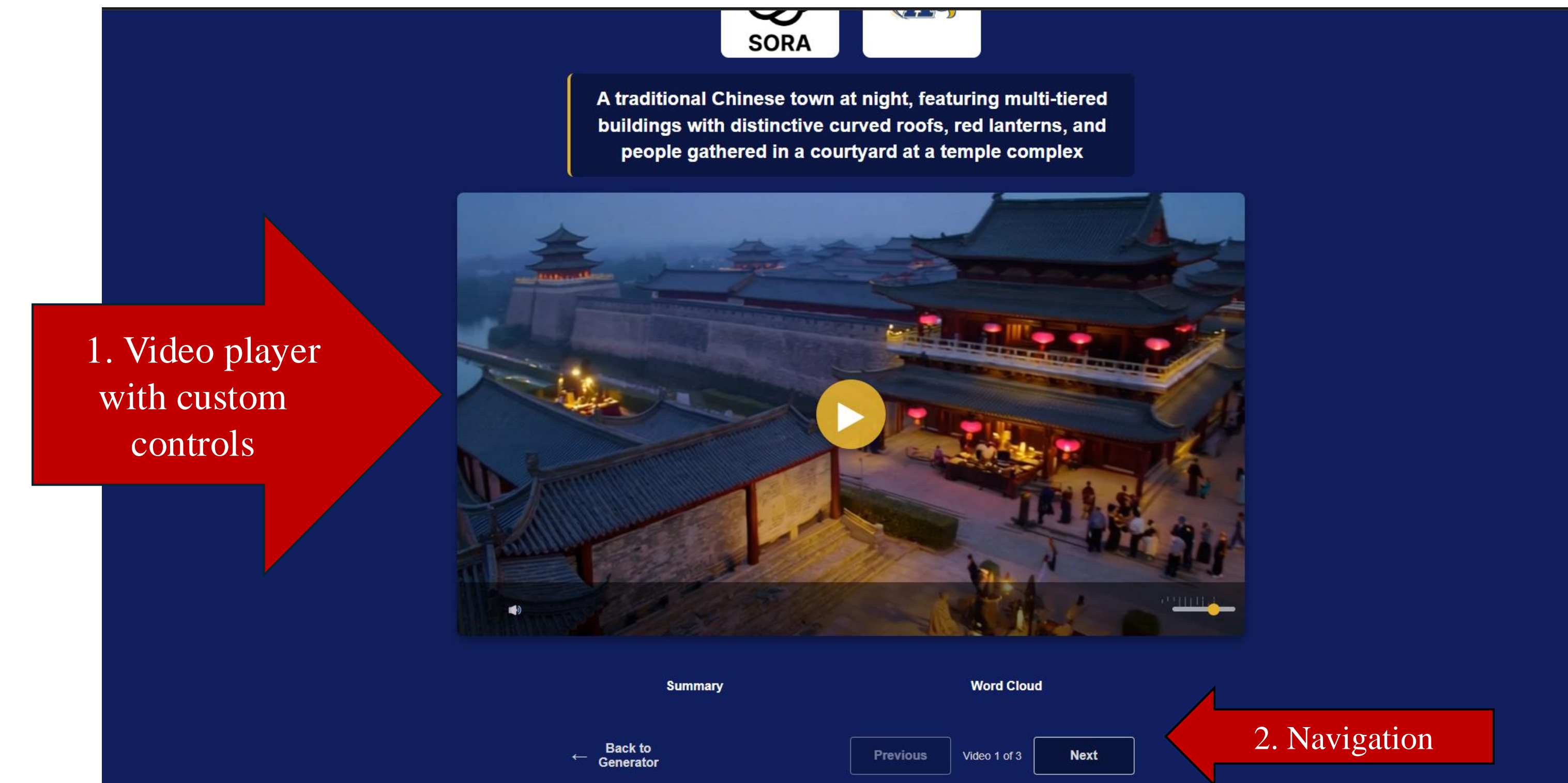


Figure 1: Video gallery page depicting custom video player and navigation

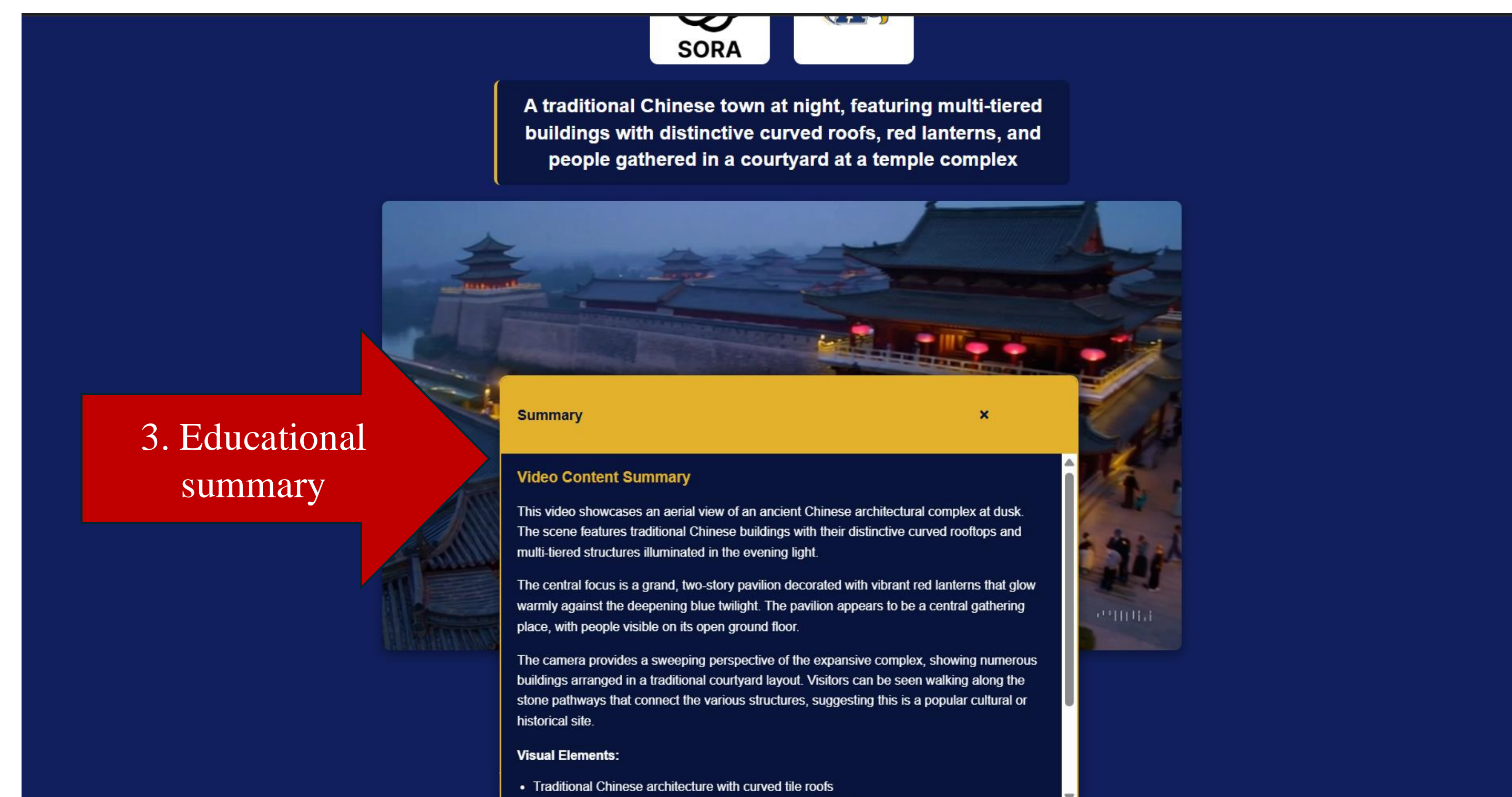


Figure 2: Depicts educational summaries within video gallery page

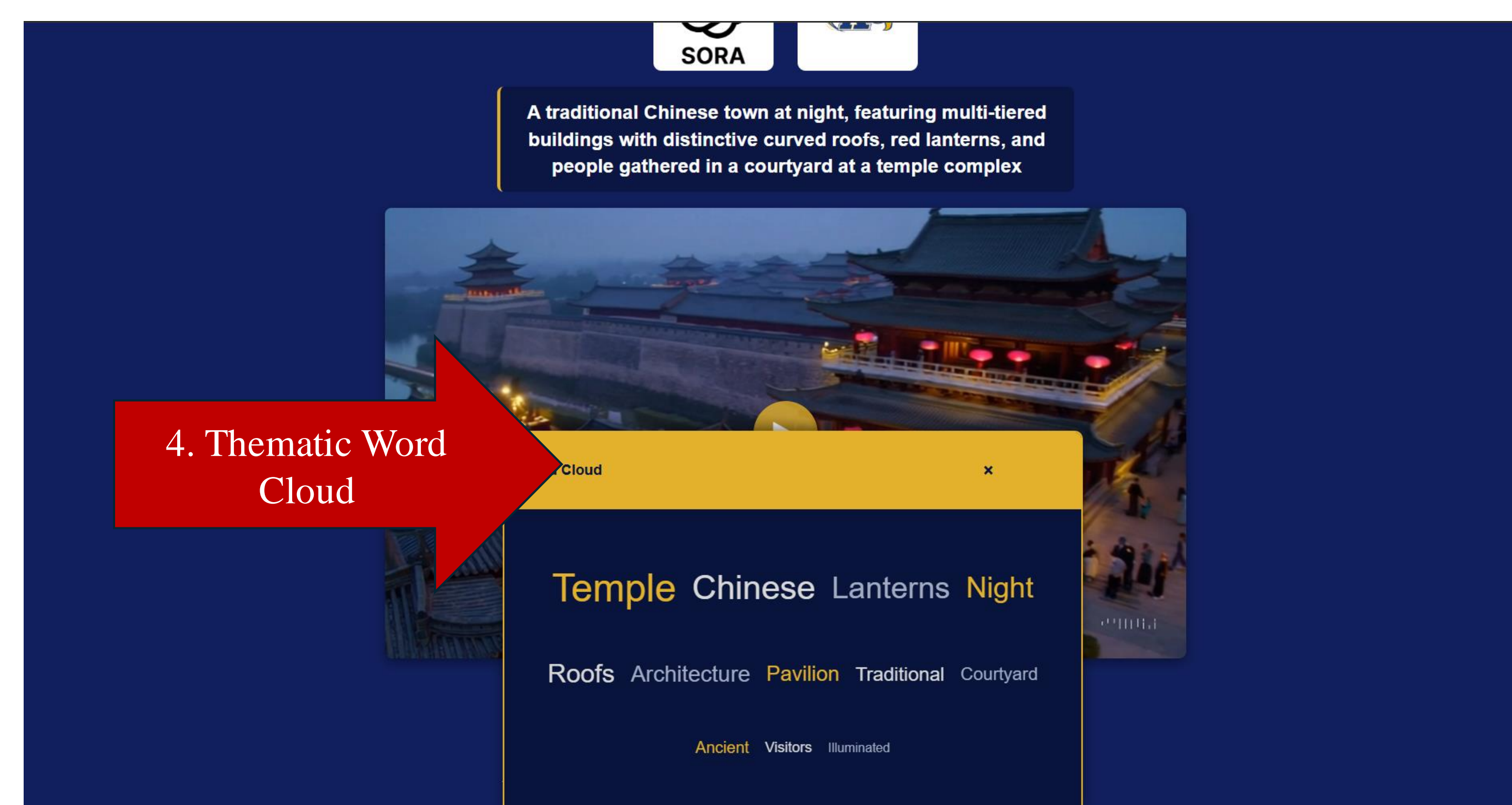


Figure 3: Depicts thematic word cloud highlighting key concepts on video gallery page

Generation Interface

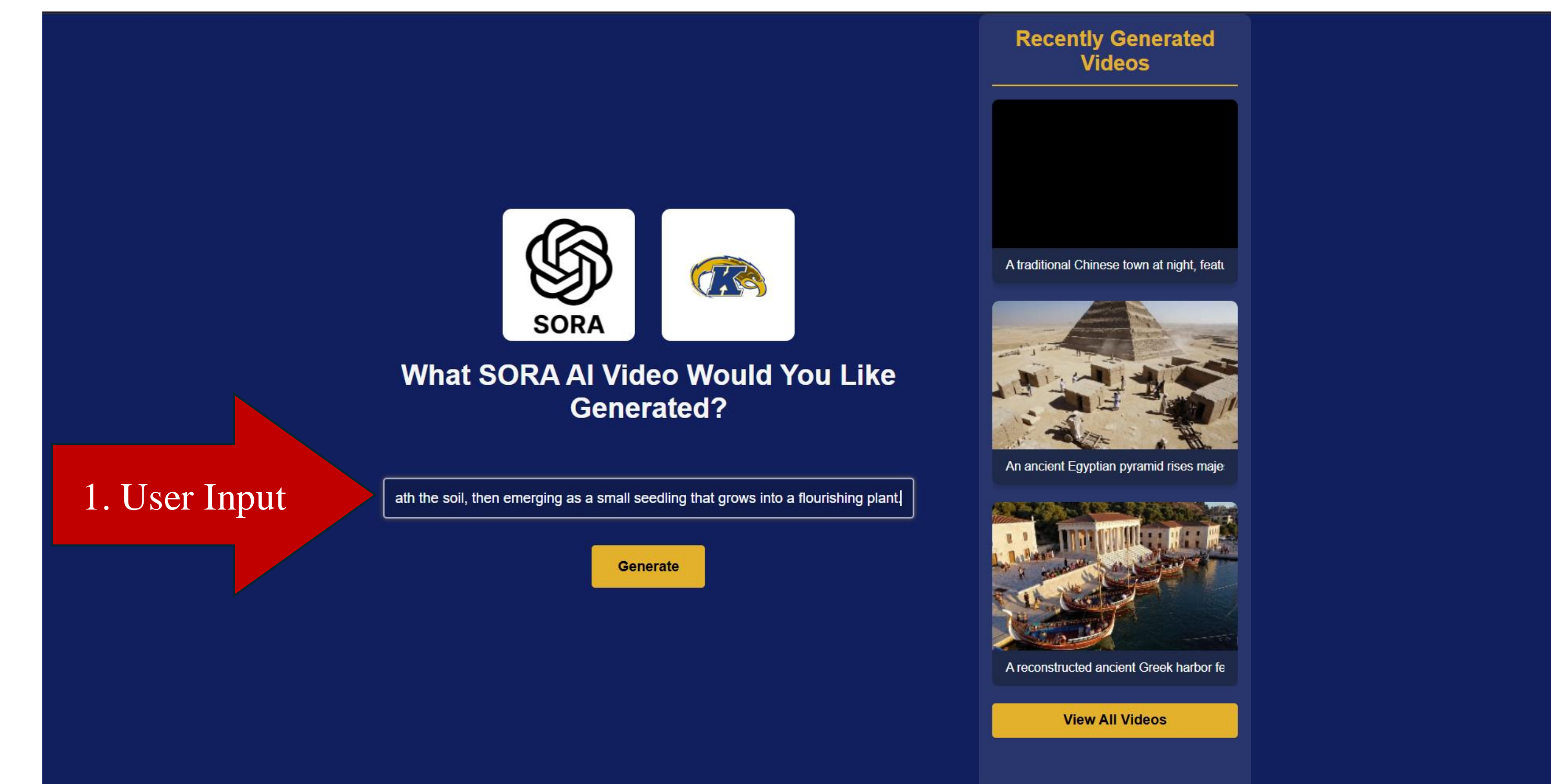


Figure 4: Depicts generation interface page with user input

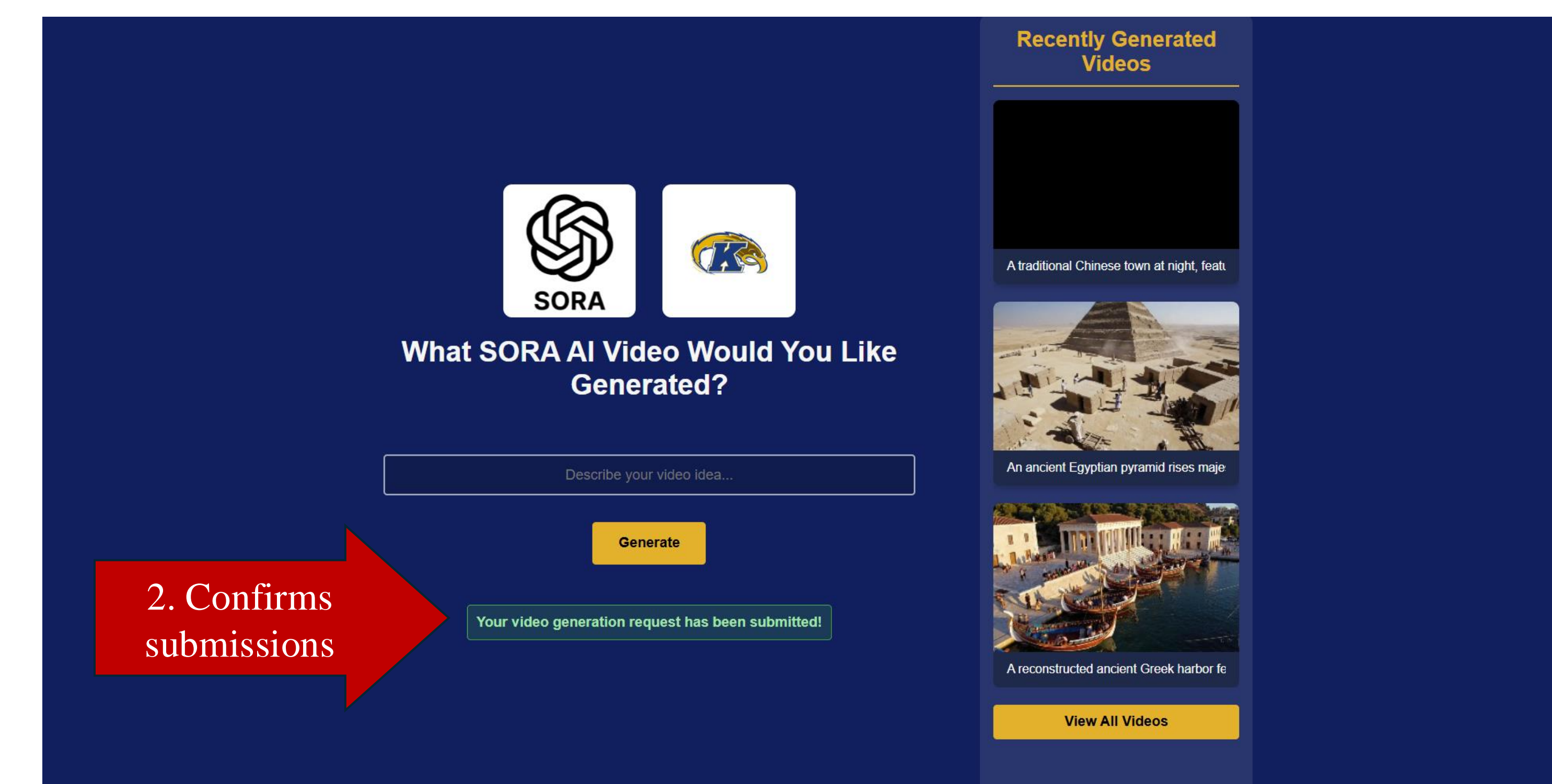


Figure 5: Depicts confirmation banner for successful user input submission

Results

