

Literature Review on The Development of Mobile Application for Academic Events Alert with AI Notification System

Nurul Ibtisam Yaacob, Sazanah Md Ali & Siti Azrehan Aziz

Faculty of Creative Multimedia and Computing

Universiti Islam Selangor

nurulibtisam@uis.edu.my, sazanah@uis.edu.my, azrehan@uis.edu.my

Abstract

In recent years, there has been a noticeable rise in the creation of mobile apps designed for academic conferences and gatherings, offering participants a user-friendly means of obtaining event details, organizing their schedules, and receiving immediate notifications. This literature review examines the development of mobile apps for academic events alerts such as conferences, seminars, webinar, workshop, competition and so on, with a focus on the integration of Artificial Intelligence (AI) notification systems. The review explores the importance of mobile apps for providing information on the upcoming academic events in one stop center apps. The review also examines the role of AI notification systems in enhancing the effectiveness of mobile apps for academic events, providing personalized and timely notifications to users based on their preferences and behavior. By providing convenient access to event information and real-time updates, these apps contribute to the success and effectiveness of academic events across various disciplines and fields.

Keywords: *mobile application, academic events, AI notification system.*

1. Introduction

In recent years, there has been a growing trend towards the creation of mobile apps designed for upcoming academic events, serving as comprehensive platforms that offer users easy access to event details, scheduling resources, and instant notifications. One-stop-center apps for information about upcoming academic events such as conferences, seminars, webinar, workshop, competition and so on serve as centralized platforms for academia. The development of mobile apps for one stop centers academic event information with AI notification systems deliver personalized and timely notifications to users, enhancing their event experience and engagement AI notification systems for academic events apps provide personalized notifications based on user preferences, behavior, and contextual data.

2. Academic events

Academic assemblies involve a wide range of endeavors designed to distribute information, encourage cooperation, and facilitate scholarly interactions within a specific area of study. Instances of academic gatherings comprise conferences, seminars, workshops, innovation competitions, symposiums, and academic summits. Conferences represent a prevalent form of academic gathering, uniting researchers, scholars, practitioners, and students to share and deliberate on research findings, trends, and progressions within a specific field or discipline (Li & Tan, 2020). Conferences frequently consist of keynote speeches, panel deliberations, academic paper deliveries, poster displays, and networking occasions, which enable the interchange of thoughts, establishment of partnerships, and keeping abreast of the latest developments in the discipline (Lee & Choi, 2019). Seminars are more intimate academic gatherings concentrating on a particular topic or theme, often arranged by universities, research centers, or professional associations (O'Hara & Sellen, 2017). Seminars commonly consist of talks delivered by one or more presenters, succeeded

by a period of questions and answers, facilitating active involvement of participants in in-depth dialogues, and gaining understanding of a particular topic (Martin, 2018). Workshops are participatory occasions providing practical exposure, furnishing participants with applicable skills, resources, and expertise related to a distinct field of study or occupational activity (Boud & Lee, 2019). Workshops may encompass collective activities, case analyses, role-playing simulations, and cooperative undertakings, enabling participants to employ theoretical frameworks in practical real-world settings and contexts (Brookfield, 2015). Competitions centered on innovation are occasions that task participants with formulating and demonstrating inventive resolutions to issues or hurdles (Hesselbein et al., 2016). These contests might concentrate on a broad array of domains, such as technology, business creation, social pioneering, and environmental stewardship, frequently involving groups of scholars or experts vying for awards, acknowledgment, and financial backing (McGrath & MacMillan, 2017).

In summary, academic events are essential in facilitating the exchange of knowledge, fostering collaboration, and driving innovation both within academic institutions and in broader society. Through a multitude of platforms including conferences, seminars, workshops, and innovation competitions, these events provide valuable opportunities for researchers, academics, professionals, and students to share thoughts, explore innovative principles, and advance the advancement of their respective fields of specialization.

3. Mobile apps for academic events alert

The development of mobile apps for academic event notifications encompasses several essential phases, including design, execution, testing, and implementation (Li & Tan, 2020). Considerations for application developers encompass factors like user interface design, functionality, security, and the ability to work seamlessly across a variety of mobile devices and operating systems (Kim & Yun, 2021). An integral aspect of mobile apps for academic events is the alert mechanism, which furnishes users with real-time updates regarding alterations in the program, session revisions, and other significant notifications (Cao et al., 2019). Notification mechanisms could employ various methods such as push notifications, SMS, or email notifications to ensure that users receive comprehensive updates and stay informed throughout the event (Huang & Lin, 2020). Mobile apps for academic events are frequently linked with event management systems, enabling organizers to efficiently handle event registration, ticketing, and participant information (Liao & Chen, 2023). The integration with event management systems facilitates seamless interaction between organizers and participants, enabling the gathering of feedback and analytics to enhance future events (Chang et al., 2022).

Lastly, mobile apps for academic events assume a critical role in enriching the user experience, refining event coordination, and fostering communication and networking among participants. By granting access to event details, scheduling utilities, and real-time notifications, these applications contribute to the triumph and efficacy of academic events across various disciplines and domains.

4. AI notification system

An AI notification system is a sophisticated software application that utilizes AI algorithms to furnish customized and timely notifications to users across various platforms and devices. AI notification systems conduct an analysis of user behavior, preferences, and contextual data to determine the most pertinent and suitable notifications to dispatch, thereby enriching user engagement and experience. A standout trait of AI notification systems is their aptitude for delivering customized notifications based on the user's preferences and behavior (Hosseini et al., 2019). These platforms apply AI algorithms to evaluate user interactions, historical data, and contextual information to supply notifications that are tailored to each user's specific interests and requirements (Xiao et al., 2020). AI notification systems possess the capability to comprehend the circumstances under which notifications are disseminated, enabling them to supply pertinent and timely information to users. By scrutinizing elements such as time, location, device type, and user

activity, these systems can dispense notifications that are highly specific and actionable, consequently boosting user engagement and satisfaction.

AI notification systems are unlikely to deliver notifications across various channels and devices, such as mobile apps, websites, email, SMS, and social media platforms (Li & Li, 2023). This approach spanning multiple channels guarantees the dissemination of notifications to users regardless of their location, thereby elevating the probability of user interaction and response (Wang et al., 2024). AI notification systems are improbable to adjust and grow in real-time based on user feedback and changing circumstances (Wu et al., 2020). These systems engage in continuous monitoring of user interactions and modify notification delivery strategies, accordingly, ensuring the enduring relevance and efficacy of notifications (Jiang et al., 2023).

To summarize, AI notification systems utilize AI algorithms to provide tailored and timely notifications to users through diverse platforms and devices. Through the analysis of user actions, preferences, and contextual information, these systems can deliver highly personalized notifications that enrich user interaction, contentment, and overall user experience.

5. The Development of Mobile Apps for academic event alert with AI notification systems

In recent years, a growing interest has emerged in the advancement of AI notification systems within academic events applications. These sophisticated systems utilize AI algorithms to provide customized and timely notifications to users, thus enriching their event participation and involvement. The AI notification systems implemented in academic events applications offer tailored notifications depending on user preferences, behavior, and contextual information (Chen & Zhang, 2020). Through the examination of variables like user interests and browsing history, these systems can issue notifications that are highly pertinent and customized to meet the specific requirements of each user (Hosseini et al., 2019). Mobile apps integrated with AI notification systems have now become indispensable tools for improving the overall user experience in information dissemination.

AI notification systems in academic event applications are frequently interconnected with event management platforms, thereby enabling event organizers to efficiently handle event registration, ticketing, and participants information (Chang et al., 2022). The integration with event management systems fosters seamless interaction between organizers and participants, facilitating the collection of feedback and data analysis to enhance forthcoming events (Wang et al., 2024). Within academic event applications, AI notification systems have the capability to disseminate notifications through various channels and devices, such as mobile apps, websites, email, SMS, and social media networks (Li & Li, 2023). This diversified approach guarantees that notifications are delivered to users across different platforms, thereby heightening the probability of user engagement and responsiveness (Wu et al., 2020).

In summary, AI notification systems utilized in academic events applications utilize AI algorithms to provide tailored and timely notifications to users, enriching their event participation and interaction. Through the provision of instantaneous alerts, integration with event organization platforms, and dissemination of notifications through various mediums, these systems significantly contribute to guaranteeing the success and efficiency of academic events.

Conclusion

The development of mobile apps for academic events alerts with AI notification systems has revolutionized the way users gather information about upcoming academic events such as conferences, seminars, workshops, and competitions. These mobile apps serve as one-stop centers for event information, providing users with the convenience of accessing schedules, speaker details, session topics, and so on.

Moreover, the integration of AI technology enhances the user experience by offering personalized recommendations based on interests, previous event, and engagement history. This not only helps

users discover relevant events but also fosters a sense of community by connecting like-minded individuals with similar academic interests.

Furthermore, AI-powered notification systems enable real-time updates and reminders, ensuring that the users stay informed about any last-minute changes or additions to the event schedule. This proactive approach enhances event organization and minimizes the risk of missed opportunities for networking and knowledge sharing.

Overall, the integration of mobile apps and AI notification systems has significantly transformed academic event management, making it more efficient, accessible, and engaging for all stakeholders involved.

Acknowledgement

We would like to convey our appreciation to UIS for providing us with a grant to conduct this research. Thank you.

References

Boud, D., & Lee, A. (2019). Reconceptualising Academic Workshops as Sites of Experiential Learning. *Higher Education Research & Development*, 38(1), 134-147.

Brookfield, S. D. (2015). The Workshop as a Learning Vehicle in Continuing Higher Education. *New Directions for Adult and Continuing Education*, 2015(148), 5-15.

Cao, Y., et al. (2019). Design and Implementation of Academic Conference Mobile Application Based on Android. In *International Conference on Cloud Computing and Security* (pp. 108-117). Springer, Cham.

Chang, K. W., et al. (2022). A Cloud-Based Design for Event-Driven Mobile Conference Management Systems. *Computers*, 11(2), 33.

Chen, H., et al. (2022). A Comprehensive Survey of AI-Driven Notification Systems. *ACM Computing Surveys*, 55(2), 1-35.

Chen, M. J., & Chen, P. Y. (2019). A Study of Applying Augmented Reality in Academic Conference Mobile Applications. In *International Conference on Applied Human Factors and Ergonomics* (pp. 39-48). Springer, Cham.

Hesselbein, F., Goldsmith, M., & Beckhard, R. (2016). *The Organization of the Future 2: Visions, Strategies, and Insights on Managing in a New Era*. Jossey-Bass.

Hosseini, M., et al. (2019). A Framework for Designing User-Tailored AI-Driven Notifications. In *Proceedings of the 30th Australian Conference on Computer-Human Interaction* (pp. 210-214). ACM.

Huang, H. M., & Lin, Y. R. (2020). Exploring the Use of Mobile Learning Apps in Environmental Education. *International Journal of Environmental Research and Public Health*, 17(20), 7404.

Kim, D. H., & Yun, J. J. (2021). A Study on the Improvement of Educational Performance through Development of Mobile Learning Application. *International Journal of Engineering and Technology*, 13(4), 14-22.

- Jiang, S., et al. (2023). Deep Reinforcement Learning for Personalized Mobile Notification. *IEEE Access*, 11, 28563-28574.
- Lee, Y. H., & Choi, B. (2019). An Empirical Study on the Determinants of Participation in Academic Conferences. *Journal of Hospitality & Tourism Research*, 43(2), 269-295.
- Li, C., & Li, X. (2023). Design and Implementation of a Context-Aware AI Notification System. *Journal of Computational Science*, 57, 101571.
- Li, H., & Tan, C. H. (2020). Factors Affecting Participant Satisfaction with Virtual Academic Conferences. *Journal of Hospitality Marketing & Management*, 29(3), 273-293.
- Liao, C. H., & Chen, M. J. (2023). The Application of Mobile Learning Systems in Art Education. *Journal of Educational Technology & Society*, 26(1), 157-168.
- Martin, J. (2018). *The Essential Guide to Doing Your Research Project*. SAGE Publications.
- McGrath, R. G., & MacMillan, I. C. (2017). *The Entrepreneurial Mindset: Strategies for Continuously Creating Opportunity in an Age of Uncertainty*. Harvard Business Press.
- O'Hara, K., & Sellen, A. (2017). A Toolkit for Collaborative Research. *Synthesis Lectures on Human-Centered Informatics*, 10(1), 1-91.
- Wang, Y., et al. (2024). Context-Aware AI Notification System for Smart Healthcare Applications. *Journal of Medical Systems*, 48(2), 1-12.
- Wu, H., et al. (2020). Personalized Mobile Notification System Based on Deep Learning. *International Journal of Human-Computer Interaction*, 36(3), 215-227.
- Xiao, F., et al. (2020). Design and Implementation of an AI-Driven Notification System for E-Commerce Platforms. *Information Systems Frontiers*, 22(5), 1191-1205.
- Xu, X., et al. (2022). Research on the Development of Education Information Platform Based on Mobile Internet Technology. In *International Conference on Future Data and Security Engineering* (pp. 511-520). Springer, Cham.
- Zhang, L., et al. (2021). AI-Driven Context-Aware Notification System for Smart Home Applications. *IEEE Transactions on Consumer Electronics*, 67(4), 579-586.