

I-URIP 2025
**INTERNATIONAL UNDERGRADUATE RESEARCH
INNOVATION, INVENTION AND DESIGN**

**UNDERGRADUATES
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TOMORROW'S
BREAKTHROUGH**

E-BOOK OF EXTENDED ABSTRACTS

GO-SERVE: A SMART VOLUNTEER REGISTRATION AND EVENT HUB

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ABSTRACT

Go-Serve, a smart application for volunteer registration and event hub, is designed to support the growing awareness and attention of volunteerism in the community. Charity events and activities hosted by non-profit organisations, student clubs, and community organisations catch people's interest to be part of as volunteers. However, aspiring volunteers have difficulties finding suitable events due to the dispersed channels of information for different events. Same goes for the organizers of the events, as they don't have a centralised platform to advertise their upcoming events and recruit potential volunteers due to limited communication, access, and visibility. Therefore, Go-Serve aims to bridge the gap between organisations and volunteers by offering a centralised platform that delivers solutions, utilising the latest mobile application technology. The app provides features that connect volunteers to the events that suit their interests, knowledge, skills, and location. Main features included in the app, such as in-app registration, user profiles, calendars, reminders, and activity tracking, are presented with a clean and easy navigation user interface. Additional smart features, such as real-time event listings, an analytic dashboard, location-based recommendations, a feedback mechanism, and in-app messaging services, enhanced the accessibility and encouraged continuous involvement for future activities. A cloud-hosted NoSQL database, Firebase Realtime Database utilises the real-time data captured by the app, and with integration to a Google machine learning framework, TensorFlow Lite achieves higher personalisation and smart responsiveness. With a systematic and visible platform, Go-Serve may significantly foster volunteerism events and activities, thus contributing a positive impact on the community.

Keywords: *mobile apps, intelligent system, volunteer, community*

INTRODUCTION

Volunteerism plays a critical role in addressing social issues, enhancing community resilience, and fostering civic engagement. It encompasses a range of activities where individuals contribute their time and effort without financial remuneration, aiming to support community needs or address social issues. Volunteerism involves individuals or groups dedicating their time and skills for the benefit of others, often in non-profit organizations or community service initiatives (Clary et al., 1998). Nowadays, the awareness and enthusiasm of the young generation towards volunteerism are increasing, aligned with the advancement of technology that enables information to be more accessible and reachable. The reasons for the soaring attention in these noble efforts are attributed to the media exposure and experience-sharing by the organisers and volunteers involved. However, the number of potential upcoming volunteers would be hindered from growing if communities are not provided with an appropriate and centralised platform. Currently, there are a huge number of websites that promote volunteerism projects. Nonetheless, scattered and sometimes outdated information on various websites failed to attract the participation of volunteers in the program.

Thus, this project, called Go-Serve, is designed to make volunteering easier and more meaningful for everyone. First, it focuses on building a simple mobile app that helps students and community members find opportunities that match their skills, interests, and location, while also giving organisations a convenient way to share events and recruit volunteers. Second, it aims to make the whole process smoother

with features such as quick sign-ups, reminders, activity tracking, personalised suggestions, and real-time updates so that communication between volunteers and organisations feels natural and engaging. Lastly, the project aims to inspire individuals to remain engaged in community service over the long term by recognising their efforts, highlighting their impact, and making volunteering a rewarding and enjoyable experience.

GO-SERVE DESIGN AND FEATURES

Go-Serve offers core features that support the functional flow of volunteering, from event planning to interaction with participants. Every functionality has been specially designed to perform tasks with minimal effort, generating efficient and smooth user experience. It is also integrated with Firebase Realtime Database. It is a cloud-based NoSQL database that lets apps capture and update data instantly. When connected to Google's machine learning tool, TensorFlow Lite, apps can provide more personalised experiences and respond more intelligently to users' needs. Volunteers are presented with a comprehensive event browsing interface that allows them to browse available opportunities by category, interest, date, or location. The app is equipped with a smart matching event system that suggests programs to users based on their past attendance, selected interests, skills, and location. For the organisation, it analyses trends to suggest program types likely to succeed in a specific location. Figure 1 displays the user interface for volunteers in the Go-Serve application.

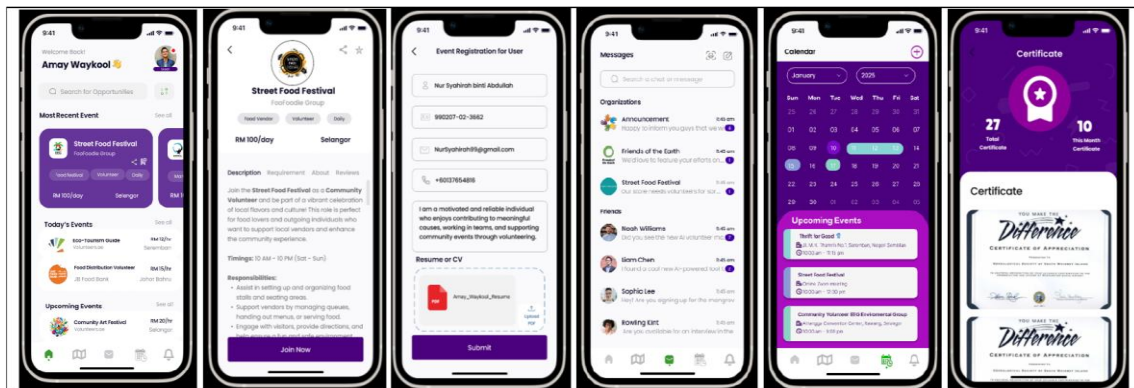


Figure 1: User Interface for Go-Serve mobile application (Volunteer Page)

The app features a range of tools to make volunteering more organised and enjoyable. Volunteers and organisations will receive real-time push notifications about event updates, approvals, feedback requests, and deadlines, ensuring no one misses important information. Attendance is made simple with a QR code scanner, allowing volunteers to check in quickly at events while their hours and records are updated automatically. To facilitate communication, the app features an in-app messaging system that supports both individual and group chats, promoting teamwork without the need for external apps. Additionally, visual dashboards provide volunteers with a clear view of their total events, certifications, and participation history, while organisations can track attendance, event performance, and feedback to inform future planning. Figure 2 shows the organisation's user interface in the application.

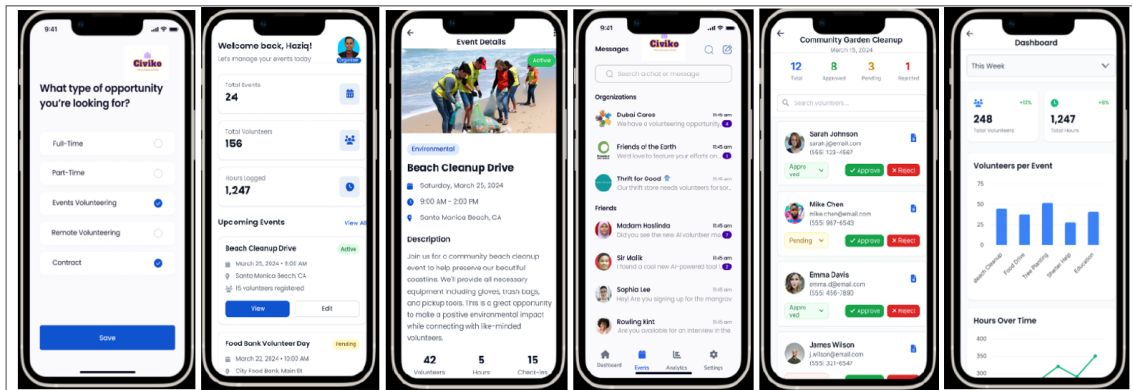


Figure 2: User Interface for Go-Serve mobile application (Organization Page)

PROJECT NOVELTY AND STRENGTHS

Go-Serve is a volunteer management platform that makes things easier and smarter for both volunteers and organisers. Go-Serve has a dual interface that gives volunteers and organizers their own dashboards, making it easier to use and less confusing. It also comes with a smart event matching tool that recommends the most suitable events for volunteers based on their interests and location, while helping organisers plan better using trend-based suggestions. The app keeps events updated automatically in real time, so full or expired events disappear without anyone needing to do extra work. In urgent situations, the emergency mobilisation feature lets organisers quickly send instant notifications to gather volunteers right away.

CONCLUSION

In conclusion, Go-Serve shows how technology can make volunteer management easier, smarter, and more effective. With its dual interface, smart event matching, real-time automation, and emergency mobilisation, the app helps solve the common problems found in traditional systems and creates a smoother experience for both volunteers and organisers. For the future, it is suggested that Go-Serve include features like gamification, such as badges or point-based rewards, to keep volunteers motivated and engaged. Adding social media integration would also help reach more people and encourage stronger community involvement. With these improvements, Go-Serve has the potential to become a leading platform for long-term volunteer engagement and management.

ACKNOWLEDGEMENT

The authors would like to thank the subject lecturer, evaluation panels, and project supervisor for their guidance and constructive feedback throughout the development of this project. Appreciation is also extended to the Faculty of Computer and Mathematical Sciences, Universiti Teknologi MARA, for the support and resources provided throughout the completion of the ISP688: Intelligent Decision-Making Support System course.

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