

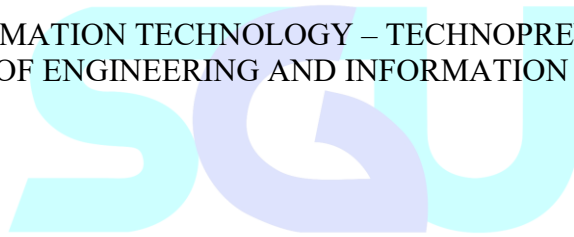
EVALUATING THE EFFECTIVENESS OF A MOBILE APPLICATION
REMINDER SYSTEM TO SUPPORT MEDICATION ADHERENCE

By

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BACHELOR'S DEGREE
in

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.



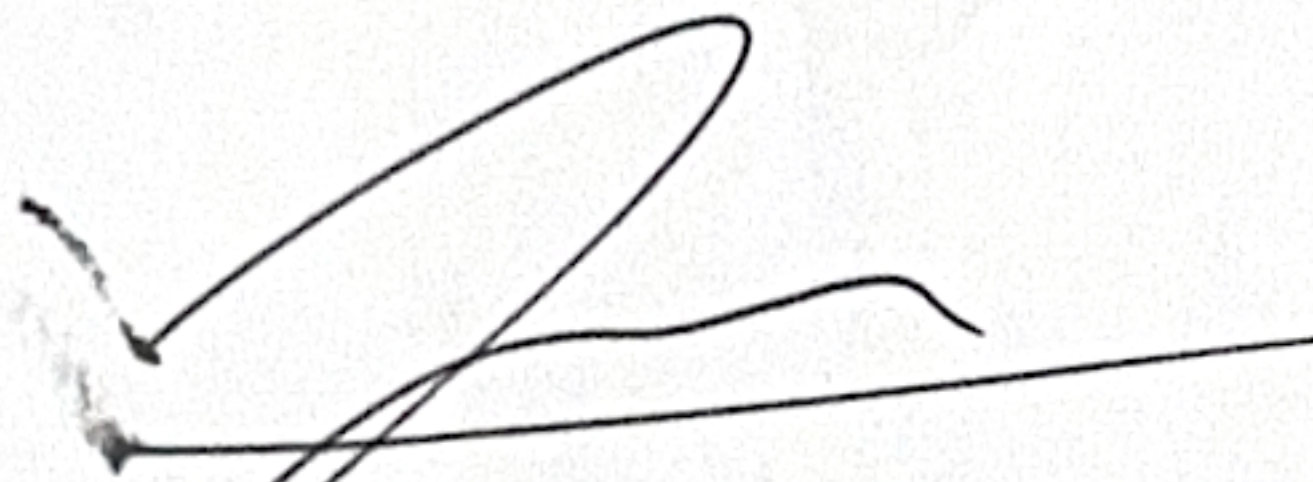
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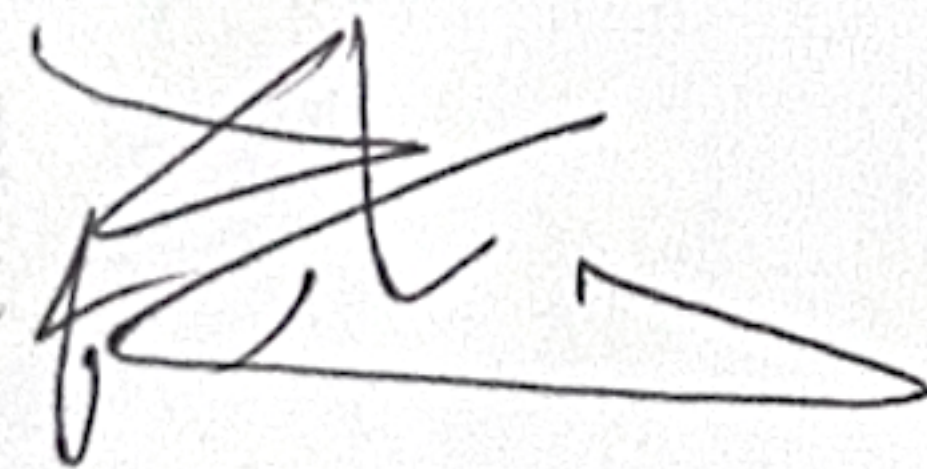
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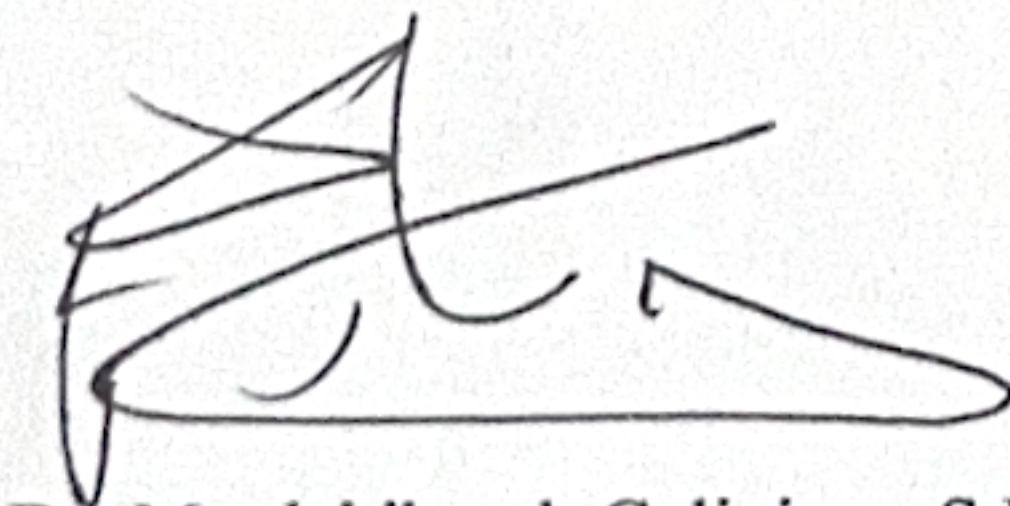
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ABSTRACT

EVALUATING THE EFFECTIVENESS OF A MOBILE APPLICATION REMINDER SYSTEM TO SUPPORT MEDICATION ADHERENCE

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Medication adherence is a persistent challenge, particularly among elderly individuals who rely on home caregivers for daily supervision. This research explores the development and evaluation of a mobile based medication reminder system aimed at supporting caregivers in improving adherences. This application was developed using an Agile methodology combined with prototyping to allow continuous iteration based on the user needs and interactive features such as action-based reminders, medication history tracking, and photo evidence logging to accommodate real world caregiving scenarios. The research adopted a mixed method approach consisting of quantitative and qualitative evaluations. Quantitative data was collected through standardized procedure based on the System Usability Scale (SUS) and the Usability Scalability Ease of Use (USE) Questionnaire to assess usability, satisfaction, and perceived effectiveness. Qualitative data was gathered through semi-structured interviews using Kvale's interview framework to assess before and after experience with the system. This research concludes that the developed mobile application successfully supports home caregivers in managing medication adherence more effectively that shown in quantitative result of high levels of usability (SUS score: 81.88) and satisfaction. While the qualitative findings indicated improvements in caregivers in memory recall, confidence in medication, and autonomy in caregiving. The study contributes to the growing body of work on mobile health solutions and offers practical recommendations for future system improvements based on real caregiver feedback.

Keywords: Medication adherence, mobile application, caregiver support, usability evaluation, reminder system, Agile Development, Kvale's Interview Framework, Mixed-Method Evaluation, Prototype-Based Design.

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DEDICATION

This thesis is wholeheartedly dedicated to all caregivers both formal and informal who tirelessly support the health and well-being of others with compassion and patience, and quiet strength.

To my parents and family, always to support and encouragement of my journey.

To the elderly patients and their caregivers who inspired this thesis to become the heart of this work.

And to those who believe of small improvements in daily life through the technology can make a meaningful impact, this is for you.



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valuable insights, and unwavering support during the entire research process. Their feedback has been instrumental in shaping the direction and quality of this work.

To my family, thank you for your endless love, prayers, and encouragement. Your belief in me has been a source of strength during every challenge I encountered.

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