

FOREWORD

Authors are delighted to present this thesis, the result of extensive research and dedicated efforts by the authors. Authors' work centers around addressing the limitations and challenges in blood pressure monitoring, aiming to enhance accuracy and user convenience.

Recognizing the significance of monitoring blood pressure, particularly among adults, authors sought to overcome the prevailing neglect in this area. The impact of high blood pressure on health, including the risks of heart attack, stroke, and kidney failure, motivated us to develop a solution that empowers individuals to take proactive measures.

Digital sphygmomanometers have gained popularity due to their ease of use and practicality. However, existing devices lack the capability to provide immediate blood pressure category results, which often necessitates additional consultations or online searches. Additionally, the manual management of medical records in Indonesia poses challenges, leading to data separation and loss.

Driven by these concerns, this thesis focuses on the development of an IoT-integrated digital sphygmomanometer. Authors aim to deliver an accurate, portable, and user-friendly device that seamlessly integrates into daily life. Furthermore, authors propose a data management system, facilitating efficient and reliable patient information storage. Through rigorous experimentation, testing, and evaluation, authors ensure the capability of the proposed digital sphygmomanometer.

Authors extend their heartfelt gratitude to the advisors, colleagues, and mentors, whose guidance and support have been invaluable throughout this research endeavour. Authors also express deep appreciation to authors' families and loved ones for their unwavering encouragement and understanding.

Authors hope sincerely that this thesis contributes to the field of blood pressure monitoring, inspiring further advancements and positively impacting healthcare outcomes.