



FACULTY OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF WATER RESOURCES ENGINEERING

**DESIGN AND IMPLEMENTATION OF AN AUTOMATED REAL-TIME REMOTE
CONTROL SYSTEM FOR BUSITEMA UNIVERSITY WATER DISTRIBUTION
NETWORK**

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*A project submitted to the Department of Water Resources Engineering in partial fulfilment
of the requirement for the award of the Bachelor of Science in Water Resources Engineering
of Busitema University*

ABSTRACT

This project is about the Design and Implementation of an Automated Real-time Remote Control System for the water distribution network at Busitema University to address inefficiencies in water distribution, energy consumption. The system integrates advanced sensors, real-time monitoring, and automation systems to optimize water distribution, reduce energy consumption and prevent water losses. By leveraging smart components such as meters, valves, and sensors, the system aims to revolutionize the university's water management. This initiative aligns with global efforts to create sustainable and efficient water management systems in the face of escalating water challenges.

Keywords: water distribution, energy consumption, sensors, real-time monitoring, automation systems, sustainable water management.

DECLARATION

We the undersigned, declare that this research proposal is our original work except where due acknowledgement has been made. We declare that this work has never been submitted to this university or any other institute for funding or for partial fulfillment for any award.

DECLARATION

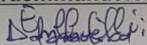
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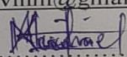
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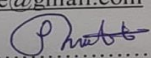
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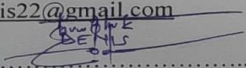
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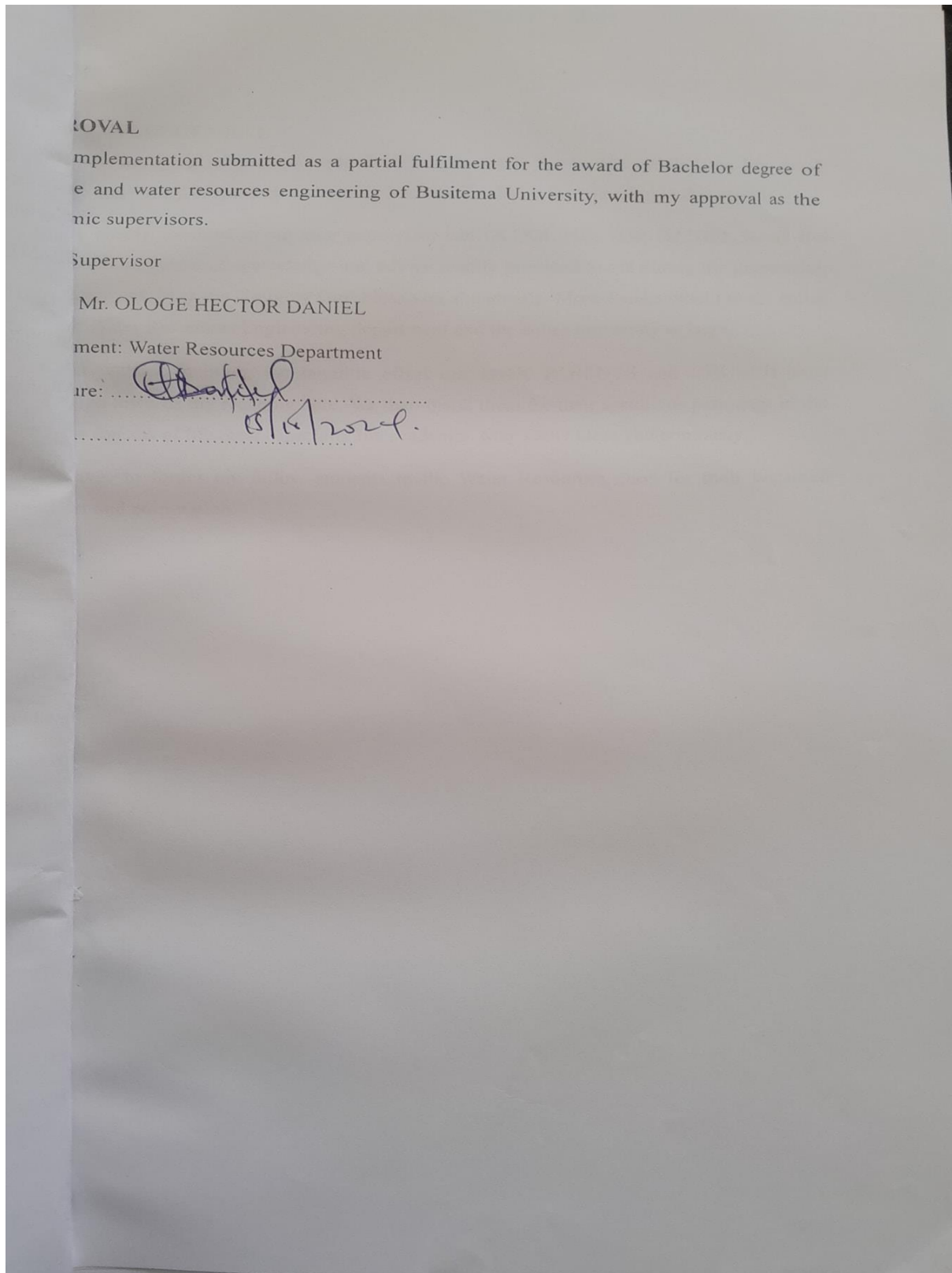
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APPROVAL

This research proposal submitted as a partial fulfilment for the award of Bachelor degree of science and water resources engineering of Busitema University, with my approval as the academic supervisors.



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We take this opportunity to concede the almighty GOD for he has granted us life, good healthy and ability to research and gather information that is incorporated in this report.

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DEDICATION

This report is dedicated to any of you who has added that extra support in my academic journey.

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LIST OF ACRONYMS

SWN – Smart Water Network

IoT – Internet of Things

SCADA – Supervisory Control and Data Acquisition System

VSP – Variable Speed Pumps

WDNs –Water Distribution Networks

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