

1. Record Nr.	UNINA9910869160803321
Autore	Marx Gómez Jorge
Titolo	Smart and Secure Embedded and Mobile Systems : Selected Papers from the First International Conference on Embedded and Mobile Systems (ICTA-EMOS), 24-25th November 2022, Arusha, Tanzania
Pubbl/distr/stampa	Cham : , : Springer International Publishing AG, , 2024 ©2024
ISBN	9783031566035
Edizione	[1st ed.]
Descrizione fisica	1 online resource (511 pages)
Collana	Progress in IS Series
Altri autori (Persone)	Elikana SamAnael Godfrey NyamboDevotha
Disciplina	004.16
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Intro -- Acknowledgement -- Contents -- A Machine Learning Internet of Agro Things (IoAT)-Adaptive Smart Cloud Farming System for Small-Scale Farmers in Tanzania -- 1 Introduction -- 1.1 Research Challenges and Motivation -- 1.2 Research Objectives and Contributions -- 2 Related Work -- 3 Research Methodology -- 3.1 Study Area -- 3.2 A Proposed Architecture for ML-Driven Agriculture IoT-Based Farming Monitoring and Management System in Tanzania -- 3.2.1 A Network Gateway -- 3.2.2 Environmental Data -- 3.3 ML-Driven IoAT Prototype Implementation in Real-Time -- 3.3.1 Cloud Storage Infrastructure -- 3.3.2 OV7670 Camera -- 3.3.3 A/ML-Driven Crop and Farm Monitoring Using IoT -- 3.3.4 Smartphone Application for Crops and Farm Monitoring -- 4 Initial Implementation Results, Outputs, and Discussion -- 4.1 Real-Time IoAT Dashboard for Data Visualization -- 4.2 Recommendations for Policy and Intervention Strategies for AI/ML and IoT in Agriculture -- 5 Conclusion -- References -- Barriers to Using Open Data in the Innovation Process -- 1 Introduction -- 2 Conceptual Analysis Process and Literature Review -- 3 Open Data and Innovation -- 4 Open Data and Innovation Barriers Influencing the Innovation Process -- 5 Conceptual Framework on Open Data and Innovation Barriers Affecting the Innovation Process -- 6 Conclusion -- References -- The IoT Based Newborn Room Temperature Control

System with Fire Detector (A Case of Mount Meru Hospital) -- 1
Introduction -- 2 Related Works -- 3 Methodology -- 3.1 Case Study
-- 3.2 System Requirements -- 3.3 System Development -- 4 Results
and Discussions -- 4.1 Proposed System Block Diagram -- 4.2 Flow
Operations of the Developed System -- 4.3 System Use Case Diagram
-- 4.4 Temperature and Humidity Measurement Test Results -- 4.5
Communication Unit Test Results -- 4.6 Discussion -- 5 Conclusion
and Recommendations.

5.1 Conclusion -- 5.2 Recommendations -- References -- A Web-
Based Human Resource Management System with Machine Learning
Techniques -- 1 Introduction -- 2 Literature Review -- 3 System
Design -- 4 System Development -- 4.1 Web Application -- 4.1.1
Employee Management -- 4.1.2 Recruitment -- 4.1.3 Employment
Onboarding and Administration -- 4.1.4 Payroll Management -- 4.1.5
Leave Management -- 4.1.6 Reporting -- 4.1.7 Dashboard -- 4.2
Machine Learning -- 4.2.1 Data Acquisition -- 4.2.2 Synthetic Data
Generation -- 4.2.3 Data Labelling -- 4.2.4 Data Preprocessing --
4.2.5 Exploratory Data Analysis -- 4.2.6 Modelling -- 4.2.7 Evaluation
-- 5 Conclusion -- References -- A Digital Twin Approach and
Challenges for Real-Time Automated Surface-Drip Irrigation
Monitoring: A Case of Arusha Tanzania -- 1 Introduction -- 2 Related
Works -- 2.1 Digital Twins -- 2.2 State of the Art in Irrigation
Automation -- 2.2.1 Observation -- 3 Materials and Methods -- 3.1
Materials -- 3.1.1 Software -- 3.2 System Development Methodology
-- 4 Results and Discussion -- 4.1 Results -- 4.1.1 Proposed Design
-- 4.1.2 Sensor Node System Design -- 4.1.3 Coordinator Node System
Design -- 4.2 System Development -- 4.3 Discussion -- 4.3.1
Challenges -- 5 Conclusion and Future Works -- References -- IoT-
Based-System for Telecom Tower Fire Detection and Aviation
Obstruction Light Monitoring -- 1 Introduction -- 2 Related Works -- 3
Materials and Methods -- 3.1 Case Study -- 3.2 System Development
Approach -- 3.3 Software Tools Integration -- 3.4 Hardware Tools
Integration -- 4 Results and Discussion -- 4.1 Results -- 4.1.1 The
Functionality of the Developed System -- 4.1.2 System Validation --
4.2 Discussion -- 5 Conclusion and Future Work -- References -- IoT
and Health Systems in Developing Countries: A Review -- 1
Introduction -- 2 Related Works -- 3 IoT and Healthcare.
3.1 IoT Architecture -- 3.2 Communication Protocols -- 3.3 Security --
3.4 IoT in Health Systems -- 4 The Challenges of IoT in Healthcare -- 5
Conclusion -- References -- Evaluating the Impact of Energy Pricing
Policies on Household Consumption Behavior in Light of Global
Pandemics Using a Theoretical System Dynamics Model -- 1
Introduction -- 2 The Peculiarity of the Electricity Market -- 2.1 Energy
Pricing Policies -- 2.2 Factors Affecting Electricity Prices -- 2.3 Types
of Pricing Policies -- 3 System Dynamic -- 3.1 System Dynamic
Methodology -- 3.2 Why System Dynamic? A Literature Review -- 4
Conclusion -- References -- Concept Integration of APQC's Process
Classification Framework (PCF)[®] and Enterprise Architecture
Frameworks with Signavio -- 1 Introduction -- 2 Background -- 2.1
Enterprise Architecture -- 2.2 Enterprise Architecture Frameworks --
2.3 Information Architecture -- 2.4 Enterprise Online Guide -- 2.5
Process Frameworks -- 3 Related Works -- 4 Methodology -- 4.1
Problem Identification and Motivation -- 4.2 Objectives of a Solution --
4.3 Design and Development -- 4.4 Demonstration -- 4.5 Evaluation
-- 4.6 Communication -- 5 Discussion -- 6 Limitations and Future
Scope -- References -- A KPI System to Measure Bicycle Attractiveness
of a City -- 1 Introduction -- 2 Data Sources -- 2.1 Bike Parking -- 2.2
Bike Counting -- 2.3 Tracking -- 2.4 Bike Infrastructure -- 2.5 Traffic

Safety -- 3 KPI System on Bike Infrastructure Quality Assessment -- 3.1 DuPont KPI System -- 3.2 Cycling Infrastructure Attractiveness KPIs and its Interrelations -- 4 Outlook and Conclusion -- References -- Assessment of ICT Infrastructure in Rural Areas to Support the Use of Websites to Disseminate Crop Production and Management Information: Case of Tanzania -- 1 Introduction -- 2 Methodology -- 3 Findings and Discussion -- 3.1 Demographics of Respondents. 3.2 Electronic Communication Devices Owned by Smallholder Farmers -- 3.3 Internet Bundles Purchased Weekly -- 3.4 Internet Speed Satisfaction Level Among Smallholders -- 3.5 Internet Browsing Skills among Smallholders -- 3.6 Charging Mobile Phones -- 3.7 Smallholders' Willingness to Learn Crop Production Using the Web -- 3.8 ICT Policies and Regulations Available in Tanzania -- 4 Conclusion -- References -- A Loan Application Management System for Efficient Loan Processing: A Case of Muhimbili SACCOS LTD -- 1 Introduction -- 2 Problem -- 3 Related Works -- 4 System Description -- 5 Implementation -- 5.1 Software Development Tools -- 5.2 Non-Functional Requirements -- 5.2.1 Security -- 5.2.2 Maintainability -- 5.2.3 Availability -- 5.3 System Outputs -- 6 Results and Discussions -- 7 Conclusion -- 8 Recommendations and Future Works -- References -- Explaining Changes in Short-Term Water Demand Patterns During the COVID-19 Pandemic: An Absorptive Capacity Perspective -- 1 Matching Water Supply and Demand -- 1.1 Matching Water Supply and Demand with Water -- 1.2 Information Technology and Absorptive Capacity -- 1.3 Approach, Method, and Context -- 2 Factors Driving Water Demand Under COVID-19 -- 2.1 Drivers of Water Demand -- 2.2 Selection and Exclusion Criteria -- 3 Results -- 4 Conclusions -- 5 Limitations -- References -- Predictors of E-Government Adoption in Developing Countries: A Survey in South Africa -- 1 Introduction -- 2 Research Aims -- 3 Literature Review and Hypotheses Development -- 3.1 Security Risk Predictors and Sociocultural Dimensions -- 3.2 Institutional Logics and Security Risk Factors -- 3.2.1 Implication and Hypothetical Stance -- 4 Method -- 4.1 Outlook, Nature of Constructs in the Instrument (Questionnaire) -- 4.2 Specific Outlook of Nature of Constructs in the Questionnaire -- 4.3 Stages of Analysis. 4.4 Addressing or Controlling Common Method Biases -- 5 Data Analysis and Results -- 5.1 The Measurement Model -- 5.2 Suitability of the Structural Model -- 5.3 Moderation Effects of Institutional Logic -- 6 Discussion -- 6.1 Recap from Literature -- 6.2 Connecting Results As Well as Literature -- 6.3 Contribution of Study -- 7 Conclusion -- 7.1 Future Research and Recommendation -- References -- A Smart Industrial Electrical Energy Analytics and Forecasting System -- 1 Introduction -- 2 Related Work -- 3 System Design -- 3.1 Conceptual Framework -- 3.2 System Architecture -- 4 System Implementation -- 4.1 Data Acquisition and Calibration -- 4.1.1 Data Acquisition -- 4.1.2 Data Calibration -- 4.2 Data Storage -- 4.3 Machine Learning/Forecasting -- 4.3.1 Data Preprocessing -- 4.3.2 Exploratory Data Analysis -- 4.3.3 Modeling -- 4.3.4 Evaluation -- 4.4 Analytics -- 5 Conclusion and Future Work -- References -- Multilevel Trustworthiness for Improved Process and Network Security in Critical Infrastructures and Domains -- 1 Introduction -- 2 Trust and Hybrid Identities for Higher LoA in IAM Domains -- 3 Improving LoA for IAM at Web Authentication Using TPM -- 4 Improving NetSec & ProSec by Trustsistor Concepts -- 5 National Educational Platform Initiative -- 6 Summary and Outlook -- References -- A Conceptual Model of the Benefits and Concerns of Wearable Health Data Management -- 1 Introduction -- 2 Research Methodology -- 3 Planning the Review -- 4

Conducting the Review -- 5 Reporting the Review -- 6 Discussion and Conclusion -- References -- Analysis of the Measurements of Cycle Path Surface Quality as Collected by Three Different Technologies -- 1 Introduction -- 2 Related Work -- 3 Measurement Methodology -- 4 Analysis of the GPS Interval Lengths -- 5 Reliability of the Measured Values -- 6 Comparison of the Two Visualization Forms.
7 Conclusion.
