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**CUSTOMER EMPOWERMENT FACTORS INFLUENCING THE  
ACCEPTANCE OF ARTIFICIAL INTELLIGENCE (AI) AND MACHINE  
LEARNING (ML) IN CREDIT RISK ASSESSMENT IN SRI LANKAN  
BANKS AND FINANCIAL INSTITUTIONS.**

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Degree of Master of Business Administration in Information Technology

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University of Moratuwa

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## DECLARATION

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Signature of the Supervisor

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## **ABSTRACT**

This research is performed to investigate the critical customer empowerment factors that significantly influence the acceptance of Artificial Intelligence (AI), and Machine Learning (ML) based credit risk assessments in the banks and financial institutions in Sri Lanka who are engaged in the lending business. Banks and financial institutions are rapidly leveraging cutting-edge technologies like AI and ML in their banking operations to render various services to their customers in their respective market context. Therefore, it is vital to understand the customer perceptions and their sense of control in this context for successful implementation of AI and ML based tools in banks and financial institution of Sri Lanka.

The researcher aimed to study and investigated key customer empowerment factors such as customer awareness, customer trust and customer privacy concerns and how far they impact in the implementation of AI and ML integrated credit risk assessment tools in the lending landscape of Sri Lanka.

The research has been carried out with quantitative methods through a well-constructed questionnaire survey from the banking customers and financial institution representatives. Their responses were validated and analyzed through statistical tools to identify the relationships between the customer empowerment factors and Acceptance of AI and ML based credit risk assessment.

The final results and the respective outcomes from this research are aimed at being recommended as a part of the research objectives to the regulatory body, CBSL, Banks and Financial institutions that aim to deploy the AI and ML integrated credit risk assessment tools in their lending business.

This study determined whether the customer acceptance of this AI and ML integrated credit risk assessment tools is controlled by customer awareness, customer trust and customer privacy concerns.

**Keywords:** Artificial Intelligence (AI), Machine Learning (ML), Creditworthiness, Credit Risk Assessment.

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## **LIST OF ABBREVIATIONS**

- AI – Artificial Intelligence
- ML – Machine Learning
- CBSL – Central Bank of Sri Lanka
- CRIB – Credit Information Bureau of Sri Lanka
- FCP – Financial Consumer Protection
- GDPR – General Data Protection Regulation
- NPL – Nonperforming Loan
- SIEM – Security Information and Event Management
- SPSS - Statistical Package for the Social Sciences
- TAM – Technology Acceptance Model
- XAI – Explainable Artificial Intelligence