A Novel ATM Security System using a User Defined Personal Identification Number With the Aid of GSM Technology

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Abstract

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Abstract:

In contrast to the past, Automatic Teller Machines (ATMs) are widely used due to their simplicity and extensive availability. Presently, ATM systems use no more than an access card which usually has a magnetic stripe (magstripe) and a fixed Personal Identification Number (PIN) for identity verification. Some other cases utilize a chip and a PIN which sometimes has a magstripe in case the chip fails as a backup for identification purposes. This method is not very secure and prone to increase in criminal activities. The need for a novel, simple as well as secure method of access is thus imperative. In the present work, a PIN is generated by the user and this PIN is made available to the ATM system by the means of a Subscriber Identity Module(SIM) in the user's Mobile Phone. This information is communicated to a Global System for Mobile Communications (GSM) module embedded into the ATM's functional framework. This method of security is more stable than the traditional methods presently in use. The method presented is dynamic due to the possibility of changing the User Defined PIN(UDPIN) in each and every transaction. Losing the access card no longer becomes a big problem to the user and the need for immediate deactivation is also eliminated. It can also be enhanced by including other security features without changing the number of verification steps. A simple protocol employing this security function has been implemented and the results are verified. The proposed system has been tested extensively and proves to be a simpler and better security measure.

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Contents

I. Introduction

The present day ATM's are Static PIN based security systems. When we are about to carry out a transaction, the PIN is fed as an input which is encrypted at the client side and the data is decrypted at the server side. In most modern ATMs, the customer is identified by inserting a plastic ATM card with a magnetic stripe or using a plastic smart card with a chip that contains a unique card number and some security information (such as an expiry date). Security is provided in the form of entering a PIN. As technology is improving, hackers are able to easily retrieve this data and the number of fraudulent activities are increasing. Hence the only way to secure the data is to replace the pre-generated and saved numbers with other forms of security. The risk of data misuse can be greatly reduced through such a replacement.

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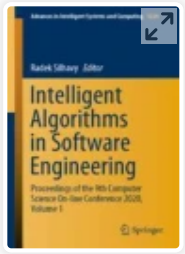

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Simplified Framework of Natural Language Processing for Structure Management of Current-Age Data

J. Shruthi & Suma Swamy

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which still doesn't address the problem associated with lightweight computational model. Therefore, the proposed study introduces a simplified modeling of natural language processing which is capable of handling the unstructured data unlike existing system without scoring any dependencies on extra resources or cost. The study also introduces an integrated syntactical-based and semantic-based which is quite novel and simplified in its form. The study outcome shows that it offers almost instantaneous response time for all the internal processes.

Keywords

Natural language processing **Text mining**

Unstructured data **Linguistic**

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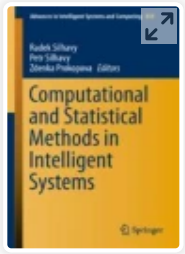

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Effectiveness of Recent Research Approaches in Natural Language Processing on Data Science-An Insight

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