Method and System Including Trained Subsystems for Calculating and Managing Default Risks of Loan Based on Multiple, Time-Varying Data Sources

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Registered Patent Region	Patent/ Filing No.	Description	Issued/ Filling Date	Status
US	63/655,696 18/929,683	Method and System Including Trained Subsystems for Calculating and Managing Default Risks of Loan Based on Multiple, Time-Varying Data Sources	4 Jun 2024 29 Oct 2024	Pending
China	202510036147.4	基于多个时变数据源计算和管理贷款违约风险的包括受训练的子系统的方法和系统	9 Jan 2025	Pending

Stage of Technology Transfer: Commercially Viable Technology/ Product Ready for Sale
Research Area: Managing Credit Risk for Online Consumer Lending

Abstract

A system and method for providing a loan to a first merchant hosting one or more shops on an e-commerce platform is disclosed. The method includes, in response to receiving a request for a loan with a specified repayment term, obtaining first data from a public data source and second data from the e-commerce platform. These inputs are provided to a trained predictor, which outputs a distribution of estimated future revenue for the merchant over the repayment term. The system uses the estimated future revenues and the merchant's cash in a payment account as collateral to assess loan risk. A Probability of Default (PD) value and a Loss Given Default (LGD) value, associated with potential loan amounts and interest rates, are calculated. Based on the PD and LGD values, one or more feasible contracts are determined, including a target loan amount and interest rate, and at least one loan contract is generated for the merchant.