Decision Support System on the Need for Veterinary Control of Passing Livestock and Farm Produce

Alexander Golubenkov, Dmitry Alexandrov, Sanjay Misra, Olusola Abayomi-Alli, Marcelo Leon, and Ravin Ahuja

Abstract The results of the development of a decision support system (DSS) that can be used by the customs. This system helps to inspectors at the border veterinary checkpoints (VCPR) to make decisions on the need for veterinary control of passing livestock and farm produce. The system makes the decisions by analyzing the known information about cargo with the use of logistic regression model. This module was developed using the Python programming language, mathematical libraries for data analysis, and framework Flask for creating Web applications. The paper also presents the results of a correlation analysis of factors with an identification of significant features, the results of testing the module, and the conclusions about its effectiveness.

Keywords Decision support system (DSS) · Logistic regression · Customs control

A. Golubenkov
Vladimir State University named after Alexander and Nikolay Stoletovs (VlSU), Vladimir, Russian Federation
e-mail: golubenkov1@yandex.ru

D. Alexandrov
National Research University Higher School of Economics (NRU HSE), Moscow, Russian Federation
e-mail: dvalexandrov@hse.ru

S. Misra (✉) · O. Abayomi-Alli
Covenant University, Ota, Ogun State, Nigeria
e-mail: sanjay.misra@covenantuniversity.edu.ng

O. Abayomi-Alli
e-mail: olusola.abayomi-alli@covenantuniversity.edu.ng

M. Leon
Universidad Nacional de Loja, Loja, Ecuador
e-mail: marceloleon11@hotmail.com

R. Ahuja
Shri Viskarma Skill University, Gurgaon, India
e-mail: ravinahujadce@gmail.com