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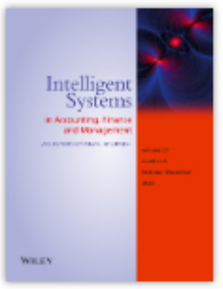

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RESEARCH ARTICLE

Journal entry anomaly detection model

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Summary

Although numerous scientific papers have been written on deep learning, very few have been written on the exploitation of such technology in the field of accounting or bookkeeping. Our scientific study is oriented exactly toward this specific field. As accountants, we know the problems faced in modern accounting. Although accountants may have a plethora of information regarding technology support, looking for errors or fraud is a demanding and time-consuming task that depends on manual skills and professional knowledge. Our efforts are oriented toward resolving the problem of error-detection automation that is currently possible through new technologies, and we are trying to develop a web application that will alleviate the problems of journal entry anomaly detection. Our developed application accepts data from one specific enterprise resource planning system while also representing a general software framework for other enterprise resource planning developers. Our web application is a prototype that uses two of the most popular deep-learning architectures; namely, a variational autoencoder and long short-term memory. The application was tested on two different journals: data set D, learned on accounting journals from 2007 to 2018 and then tested during the year 2019, and data set H, learned on journals from 2014 to 2016 and then tested during the year 2017. Both accounting journals were generated by micro entrepreneurs.

References Related Information

Recommended

An Overview of Investment Accounting
The Investment Industry for IT Practitioners: An Introductory Guide, [1]

The General Ledger and Trial Balance
The Fast Close Toolkit, [1]

Value, Income and FTP
Unified Financial Analysis: The Missing Links of Finance, [1]

Accounting journal entries as a long-term multivariate time series: Forecasting wholesale warehouse output
Mario Zupan
Intelligent Systems in Accounting, Finance and Management

REFERENCES

Citing Literature

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