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Advanced Data Mining Techniques for Medicinal and Societal Sciences

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Abstract: This paper centers around advancement of information mining calculations that outflank traditional information mining methods on friendly and medical care sciences. Toward this goal, this exposition creates two information mining methods, every one of which tends to the impediments of a traditional information mining strategy when applied in these specific circumstances. To start with, we propose an original information mining system that can recognize critical information factors influencing a given objective variable, even within the sight of multicollinearity. Additionally, the proposed technique can rank these information factors as per their impact on the objective variable. Then, we apply our proposed technique to a genuine dataset in segment research ID of huge variables advancing or upsetting populace development (Part I). Secondlly, we foster a characterization technique for imbalanced information where the greater part class has essentially a bigger number of occasions than the minority class. Then, at that point, we apply our proposed imbalanced-information arrangement technique to eleven open datasets, the vast majority of them connected with medical services sciences (Part II).

Keywords: Data Mining, algorithm, social sciences, healthcare sciences

REFERENCES

[1].Paul Attewell, David B. Monaghan, and Darren Kwong. Data Mining for the Social Sciences: An Introduction. University of California Press, 2015.

[2].Francis R. Bach, David Heckerman, and Eric Horvitz. Considering cost asymmetry in learning classifiers. The Journal of Machine Learning Research, 7:1713–1741, 2006.

[3].Patricia E. Beeson, David N. DeJong, and Werner Troesken. Population growth in US counties, 1840–1990. Regional Science and Urban Economics, 31(6):669–699, 2001.

[4].Andrew P. Bradley. The use of the area under the ROC curve in the evaluation of machine learning algorithms. Pattern Recognition, 30(7):1145–1159, 1997.

[5].Leo Breiman, Jerome Friedman, Charles J. Stone, and Richard A. Olshen. Classification and regression trees. Chapman & Hall/CRC, 1984.

[6].Carla E. Brodley and Mark A. Friedl. Identifying mislabeled training data. Journal of Artificial Intelligence Research, 11:131–167, 1999.

[7].David L. Brown. Migration and community: Social networks in a multilevel world. Rural Sociology, 67(1):1–23, 2002.

[8].David L. Brown, Glenn V. Fuguitt, Tun B. Heaton, and SabaWaseem. Continuities in size of place preferences in the united states, 1972–1992. Rural Sociology, 62(4):408–428, 1997.

[9].Gavin Brown, Jeremy Wyatt, Rachel Harris, and Xin Yao. Diversity creation methods: A survey and categorisation. Information Fusion, 6(1):5–20, 2005.

[10]. Eunshin Byon, Abhishek K. Shrivastava, and Yu Ding. A classification procedure for highly imbalanced class sizes. IIE Transactions, 42(4):288–303, 2010.

[11]. Gerald A. Carlino and Edwin S. Mills. The determinants of county growth. Journal of Regional Science, 27(1):39-54, 1987.

[12]. Chih-Chung Chang and Chih-Jen Lin. LIBSVM: A library for support vector machines. ACM Transactions on Intelligent Systems and Technology, 2:27:1–27:27, 2011.

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[13]. Software available at http://www.csie.ntu.edu.tw/ cjlin/libsvm.

[14]. Samprit Chatterjee and Ali S. Hadi. Regression analysis by example. Wiley- Interscience, 2006.

[15]. Nitesh V. Chawla, Kevin W. Bowyer, Lawrence O. Hall, and W. Philip Kegelmeyer. SMOTE: Synthetic Minority Over-sampling Technique. Journal of Artificial Intelligence Research, 16:321–357, 2002.

[16]. Nitesh V. Chawla, Nathalie Japkowicz, and Aleksander Kotcz. Editorial: Special issue on learning from imbalanced data sets. ACM SIGKDD Explorations Newsletter, 6(1):1–6, 2004.

[17]. Guangqing Chi and David W. Marcouiller. Isolating the effect of natural amenities on population change at the local level. Regional Studies, 45(4):491–505, 2011.

