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CORRECTION

Correction to: Complex networks are structurally distinguishable by domain

Ryan A. Rossi[1] · **Nesreen K. Ahmed**[2]

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Correction to:
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The authors of this Erratum have jointly agreed that James P. Canning, Emma E. Ingram, Sammantha Nowak-Wolff, Adriana M. Ortiz and Karl R. B. Schmitt, referred to in the acknowledgements of the original version of the article [1], are co-authors of this article.

At the same time, the following amendments to the content of the original version of the article are made as follows (references are those of the original version of the article).

Section 2 Related work

Finally, we also examine a different set of network categories […]. Despite these differences, we see our work and [8] as complementary and confirmatory of one another. Both works convey the overall message that a network's category can be predicted with high accuracy, and that similarities and differences between categories can lead to interesting insights. In a similar vein, but with a more limited scope of features, [9] presented a taxonomy of networks based on community structures.

Section 3.2.1. Real-world network data

Our data include several small classes (e.g., Ecology, Web, and Road) with less than 20 entries and several large classes with over 100 networks (e.g., Facebook and Cheminformatics). This creates a challenge when performing classification due to class imbalance [3]. Such class imbalance is a widely recognized problem in machine learning [4, 5]. While our work has taken very basic steps to address this problem (see next paragraph), we recognize that the models learned with the current data set may not be well trained for the smaller classes. This does not take away from our overall findings that the categories, and especially the synthetic models, are highly distinguishable. A key step in the extension of this work, both for deployability and future research, is to expand the training data used for our models or use one or more of the recently developed techniques for addressing imbalance in such classification problems. For example, see Zhang et al. [10].

Down-Sampling Process. To down-sample cheminformatics, the networks were clustered using a k-nearest neighbor algorithm [6]. The networks formed four clusters based on an elbow plot. From each cluster, we then randomly selected 20% of the networks. After a down-sampling process, the subset of cheminformatics had 119 networks.

[1] Rossi, R.A., Ahmed, N.K. Complex networks are structurally distinguishable by domain. Soc. Netw. Anal. Min. 9, 51 (2019).

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✉ Ryan A. Rossi
rrossi@adobe.com

Nesreen K. Ahmed
nesreen.k.ahmed@intel.com

[1] Adobe Research, 345 Park Ave, San Jose, CA, USA

[2] Intel Labs, 3065 Bowers Ave, Santa Clara, CA, USA