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Profile

Wang Zhe, Professor, Doctoral Supervisor, Shanghai Shuguang Scholar. He has led 4 National Natural Science Fund Projects and undertaken multiple provincial and ministerial level projects. In recent years, he has published 60 journal papers indexed by SCI and applied for 24 open invention patents. He serves as the member or editor of multiple special academic committees and journals.

Research Field

Machine learning, Pattern recognition, Imbalanced problem learning, Multi-kernel and pattern representation learning

Research results and selected published papers

[1] Zhe Wang, Songcan Chen*, Tingkai Sun. MultiK-MHKS: a novel multiple kernel learning algorithm. IEEE Transactions on Pattern Analysis and Machine Intelligence. 30(2):348-353, 2008.

[2] Zonghai Zhu, Zhe Wang*, Dongdong Li, Wenli Du. Globalized multiple balanced subsets with collaborative learning for imbalanced data. IEEE Transactions on Cybernetics, Early access, pp:1-11, doi: 10.1109/TCYB.2020.3001158, 2020.

[3] Zonghai Zhu, Zhe Wang*, Dongdong Li, Yujin Zhu, Wenli Du*. Geometric structural ensemble learning for imbalanced problems. IEEE Transactions on Cybernetics. 50(4): 1617-1629, 2020.

[4] Zhe Wang*, Chenjie Cao, Yujin Zhu. Entropy and confidence based undersampling boosting random forests for imbalanced problems. IEEE Transactions on Neural Networks and Learning Systems. Early access, pp:1-14, doi: 10.1109/TNNLS.2020.2964585, 2020.

[5] Yujin Zhu, Zhe Wang*, Hongyuan Zha, Daqi Gao*. Boundary-eliminated pseudoinverse linear discriminant for imbalanced problems. IEEE Transactions on Neural Networks and Learning Systems. 29(6): 2581-2594, 2018.

[6] Zhe Wang, Songcan Chen*, Jun Liu, Daoqiang Zhang. Pattern representation in feature extraction and classifier design: matrix versus vector. IEEE Transactions on Neural Networks. 19(5):758-769, 2008.

[7] Zhe Wang*, Chenjie Cao. Cascade interpolation learning with double subspaces and confidence disturbance for imbalanced problems. Neural Networks. 118:17-31, 2019.

[8] Zhe Wang*, Zonghai Zhu, Dongdong Li. Collaborative and geometric multi-kernel learning for multi-class classification. Pattern Recognition. 99, pp:1-14, 107050, 2020.

[9] Zhe Wang*, Zonghai Zhu. Matrix-pattern-oriented classifier with boundary projection discrimination. Knowledge-Based Systems. 149:1-17, 2018.

[10] Zhe Wang*, Changming Zhu, Daqi Gao, Songcan Chen*. Three-fold structured classifier design based on matrix pattern. Pattern Recognition. 46(6):1532-1555, 2013.