

Financial Performance Evaluation and Forecasting of Enterprises by the Combination of PCA and CNN Deep Learning

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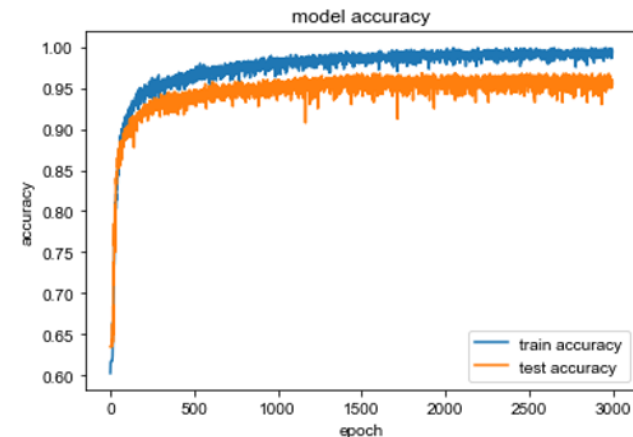
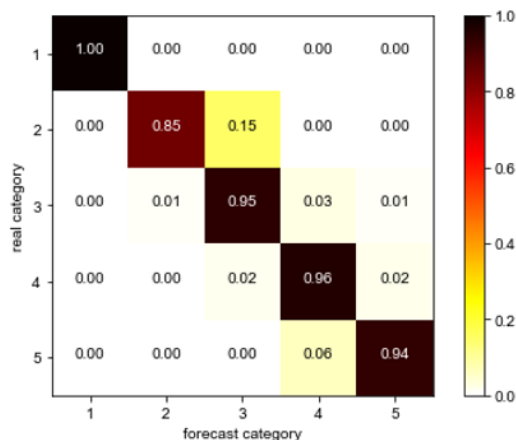
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Problems & Ideas

- Problems existing in traditional financial evaluation model:
 - Lack of clustering and prediction research based on evaluation.
 - With a large number of enterprise samples, especially in the case of big data, performance cannot be accurately evaluated.
- Ideas: Financial Performance Evaluation and Forecasting of Enterprises by the Combination of PCA and CNN Deep Learning.

Main Contributions

- Contributions:
 - A financial performance evaluation model combining unsupervised learning and supervised learning to realize efficient evaluation and early warning of enterprise finance;
 - Based on the PCA scoring results , the K-means clustering algorithm is used to classify the enterprise grades, which overcame the cumbersome and subjective factors of traditional performance evaluation ;
 - An enterprise performance evaluation method based on PCA and deep learning is proposed, which can effectively reduce investment risk.



Left: Heat map of CNN forecast enterprise performance classification; Right: PCA-CNN model train and test evaluation curve.