Review of: "Academic Performance Prediction Based on Convolutional Neural Networks and IRT Parameters as RGB Images"

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Potential competing interests: No potential competing interests to declare.

1. "IRT" must be specified in the introduction, and the three IRT parameters must be described in detail to understand their meaning in the model.
2. Transforming IRT parameters into RGB images adds complexity without any evidence for improving accuracy.
3. The choice of CNNs, generally used for spatial data, is unconvincing here since IRT data is numerical.
4. RGB matrix size inconsistencies pose challenges for CNN input, and comparisons with traditional methods are missing, weakening claims about this approach's advantage.
5. Statistical validation relies heavily on Spearman correlation, lacking comprehensive metrics like accuracy and recall, which limits insights into model generalizability.
6. A comparison with other predictive models (e.g., standard regression or simpler neural networks) would clarify the advantage of this approach.
7. The study would benefit from detailed ablation studies to show how each component (CNNs, RGB encoding) contributes to the results.