Abstract

Computer-based examination fraud control is an important research area in e-testing. Fraud prevention ensures that the outcome of academic or professional tests approximates the actual capabilities of the candidates in question. Thus, instead of depending wholly on human efforts to monitor a real life examination, requisite computational techniques could be deployed to ensure a more effective invigilation process. Many cases of cheating in examinations involve the collusion of two or more individuals, especially based on the level of familiarity that may have existed before the examination. Thus, an effective control system should strongly incorporate anti-collusion measures. The major contribution of the Matrix-Based Fraud Check technique is the application of randomized algorithms to prevent examination fraud. This research achieves this by first breaking the pre-examination social links that could lead to examination collisions. The strength of this model is that it could analyze the existing seating arrangements and as well suggests the most optimal arrangement that reduces collusion to the barest minimum. The model also generates a watch list of candidates that are most likely to be vulnerable to collusion in a particular examination hall. Such valuable information will no doubt
guide the examiners in the invigilation process.

References


Index Terms
Keywords

Randomized Algorithms, Matrix-Based Fraud Check, e-Testing, Watch List