



CNAR 2022 WORKSHOP:
PROTECTING THE INTEGRITY OF YOUR EXAM PROGRAM:
HOW TO LEVERAGE DATA FORENSICS AND TAKE ACTION
OCTOBER 24TH, HALF DAY (P.M.)

What You Will Learn: Locard’s principle on forensic evidence is summarized by the mantra “every contact leaves a trace.” While generally discussed in terms of physical evidence left at the scene of a crime, we can likewise state that when people interact with exams and exam questions in abnormal and fraudulent ways they are likely to leave traces of their acts, occurring as irregularities in their answer choices, score patterns, and response times. Data forensics for exam security is the use of statistical trends and analytics to detect these traces of fraudulent behavior. It has successfully been used to detect activity like proxy testing (when the exam is completed by someone other than the test taker), item pre-knowledge (access to active exam questions prior to taking the test), and exam site collusion.

Identifying suspected exam fraud and taking action as early as possible is a crucial component of exam security and the integrity of an exam program. This workshop will provide practical guidance on the types of analyses proven to detect cheating and procedures for identify associated exam questions, exam forms, and candidates for further investigative action. Analyses will range from simple statistical checks that can be easily implemented to more complex methods like score pattern and response similarity analysis. Examples will be presented of results consistent with normal testing behavior as well as results from confirmed incidences of test fraud.

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Why is this topic important to regulators?

- Licensure exams lead to high-stakes decisions which makes maintaining the security and integrity of the exam program extremely desirable. The quality of a licensure program is heavily dependent on the validity and fairness of its exams which requires a multi-method approach to test security. Data forensics adds an additional layer to the traditionally used test security protocols.

What key takeaway will workshop attendees learn or implement?

- Attendees will be exposed to practical and proven statistical methods for identifying cheating behavior. While some of the methods will be complex and may require the assistance of a statistician, others will include simple steps that can be implemented as a first line of detection.

What are changes and trends regulators should be aware of and monitor?

- The Covid-19 pandemic has resulted in the need for flexible testing options, like remote proctoring also known as online testing. While these options have been extremely helpful in allowing test takers to continue to pursue assessments to advance their careers, it also produces challenges for high stakes exams as tests are taken outside of the traditional test site environment. Introducing data forensics early as part of any overall test security strategy allows time to gather baseline data that will help to establish expected norms thus allowing easier detection if and when any cheating activity starts to occur.

