

SaTC: EDU: Improving Student Learning and Engagement in Digital Forensics through Collaborative Investigation of Cyber Security Incidents and Simulated Capture-the-Flag Exercises

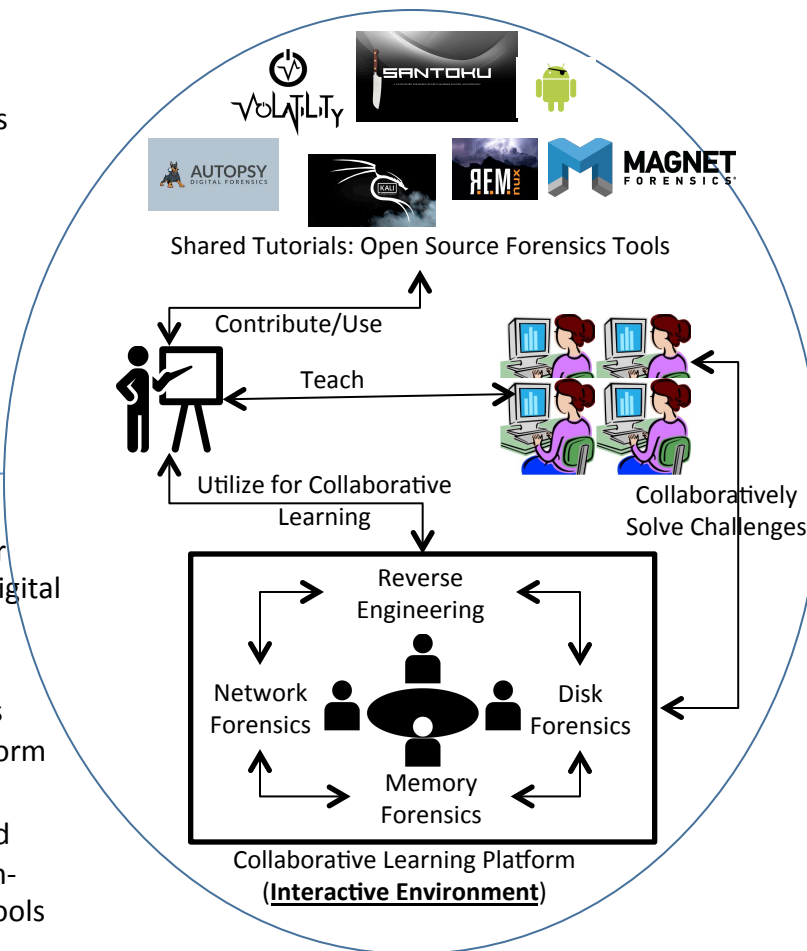


Challenge:

- Teaching digital and mobile forensics requires extensive development of hands-on experiences and teaching modules
- Hard to develop teaching materials
- Additional tutorials and hands-on experiences needed for open-source digital forensics tools
- Students need collaborative practices so they can learn the basics of incident responses
- There is no platform for sharing experiences and teaching artifacts

Scientific Impact:

- Advance pedagogy and education of digital forensics
- Identify educational challenges related to teaching digital forensics
- Compare open-source digital and mobile forensics tools with respect to their capabilities and features
- Identify pros/cons of different dynamic and static analysis tools targeting digital and mobile forensics



Broader Impact:

- Support pedagogy and education of cyber security
- Promote collaborative learning and team-based activities for students learning forensics
- Support instructors with already developed educational materials, hands-on experiences, and tutorials to ease course development and offering
- Enable instructors share their teaching artifacts and thus promote cyber security education and practices

Solution:

- Develop an educational platform for collaborative learning focusing on digital forensics and incident responses
- Enable instructors to share their educational materials and examples through a common and public platform
- Develop online tutorials, hands-on experiences, teaching materials, and training videos for widely used open-source digital and mobile forensic tools

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