Cognitive Human Enhancements for Cyber Reasoning Systems

Mots clés :

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Résumé du projet de recherche (Langue 1)

The efficient discovery and mitigation of software vulnerabilities plays a crucial role to improve the security of the existing digital infrastructure. To date, this task has been either delegated to automated tools or assigned to human analysts. While many classes of automated techniques have been proposed in recent years (often combining fuzz testing with binary analysis and instrumentation), computers are still limited in their ability to explore complex applications and detect subtle bugs. The goal of this project is to design new techniques to enable a fruitful "collaboration" between humans and cyber reasoning systems to achieve the scalability, automation, and accuracy required to discover vulnerabilities in real-world software.