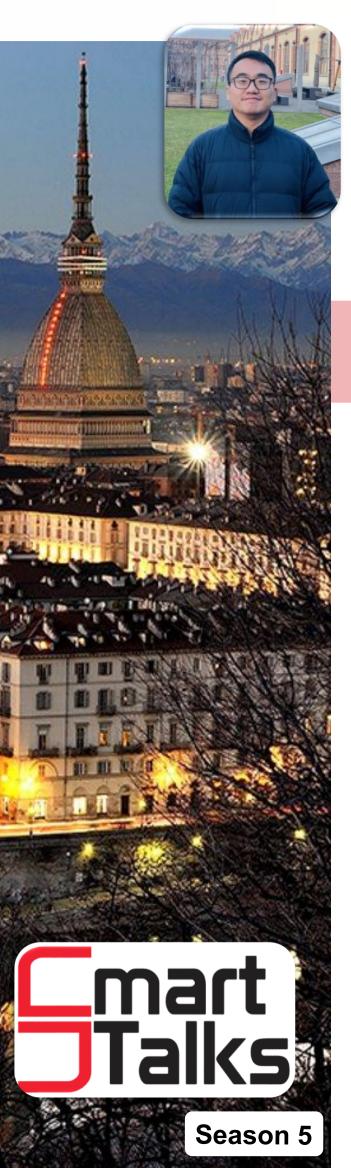




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CFA-Bench: Cybersecurity Forensic LLM Agent Benchmark and Testing

ABSTRACT

The rapid evolution of cyber threats and the increasing sophistication of cyberattacks have made **digital forensics** a cornerstone of modern cybersecurity. In this context, Large Language Models (**LLMs**) present a compelling opportunity to augment cybersecurity forensics.

To investigate the capabilities of LLM agents in performing cybersecurity forensic tasks enable fair comparisons, we introduce CFAbench, a novel benchmark incorporating realworld incident response scenarios to evaluate their forensic reasoning abilities. We conduct tests on different LLM agent architectures. While preliminary, our findings demonstrate of LLM agents in cybersecurity potential forensics, revealing their strengths and critical areas for improvement. We are continuing to enrich the benchmark with broader scenarios and polish its structure, while also refining agent design to improve their performance on complex cybersecurity forensic tasks.