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Agentic AI Honeypot: A Real-Time Scam Intelligence and Disruption Platform

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Abstract: *The rise in online scams and digital frauds is creating structural challenges to cybersecurity systems. Traditional fraud detection can only block at the message or content level hence their ability to gather actionable intelligence is limited. In this research, we propose an Agentic AI Honeypot system: it is a cybersecurity framework that integrates intelligent capabilities to interactively respond the fraudsters with generative artificial intelligence.Using Google Gemini AI, the proposed system simulates conversations with fraudsters that resemble human interactions, and extracts key intelligence like UPI IDs, evil URLs, and scam patterns. System architecture describes the arrangement of various components in a system as illustrated below: Here, the entire system framework deals with data flow using a Flask-based back-end coupled with MongoDB, followed by intelligence extraction module that supports Regex to extract information vis web interface along ultimate real time analytics visualization. Coupled with the monitoring and identification of relevant characteristics, we can extract structured indicators for fraud that will assist us in analyzing best practices against cybercrime. The novel solution converts conventional reactive fraud detection into an intelligent, proactive intelligence-gathering platform that can provide valuable assistance to investigators at the cybercrime investigation and prevention level.*

Keywords*:* *cybersecurity*

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