McCOY COLLEGE OF BUSINESS
TEXAS STATE UNIVERSITY

WRITTEN TESTIMONY OF DR. TAHIR EKIN

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UNITED STATE SENATE

SPECIAL COMMITTEE ON AGING

on

Modern Scams: How Scammers Are Using Artificial Intelligence & How We Can Fight Back

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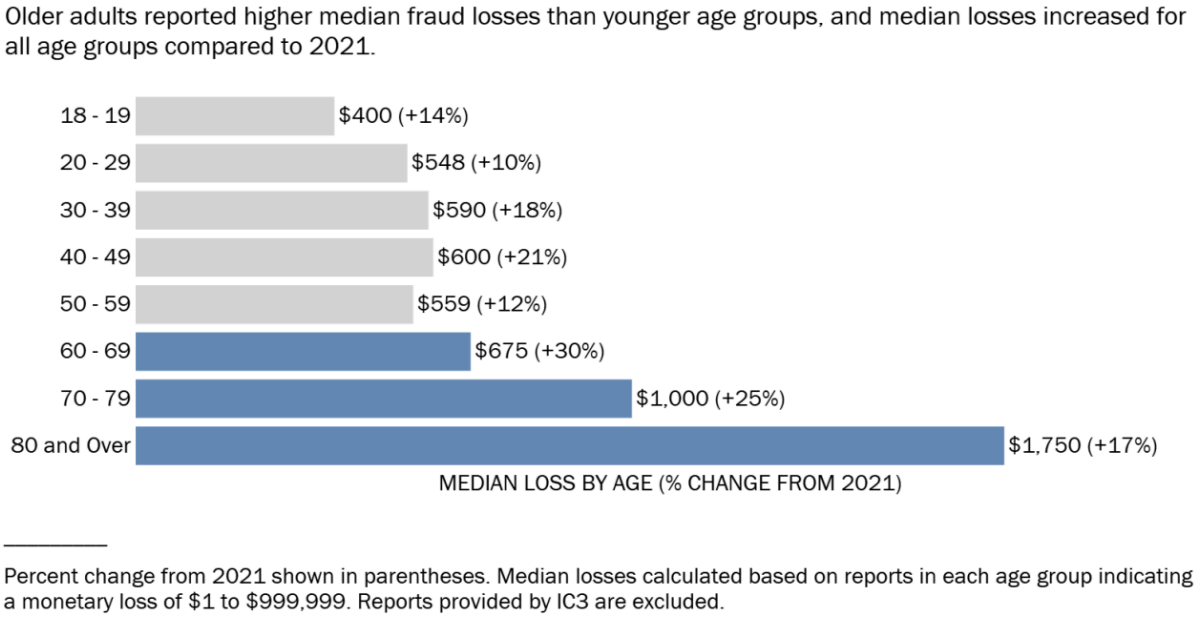
Introduction

Good morning, Chairman Casey, Ranking Member Braun, and esteemed members of the Committee on Aging. Today, as we convene, it is alarming to acknowledge an 81% increase in losses to scams among older Americans, amounting to billions of dollars in the past year[1]. I am Dr. Tahir Ekin, Fields Chair in Business Analytics and a professor at McCoy College of Business, Texas State University. My research delves into the critical intersection of artificial intelligence (AI) and fraud detection. I am honored to testify on the urgent matter of modern scams targeting older Americans and the pivotal role AI plays in both enabling and combatting these threats.

Scams targeting older adults: Role of AI

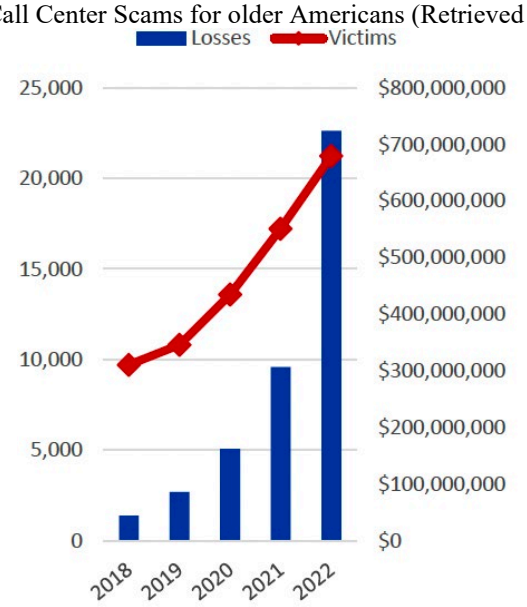
Scams continue to affect older Americans at alarming rates[2] [3] (refer to Figure 1). Despite improved awareness and educational programs, both the losses and the number of victims have surged[1] (see Figure 2). This prompts the question: Are scammers becoming more sophisticated, or are our responses lagging? The reality likely involves a combination of both factors.

Figure 1. 2022 Median Individual Loss Reported by Age (Retrieved from FTC[3])



[1] [1] https://www.ic3.gov/Media/PDF/AnnualReport/2022_IC3ElderFraudReport.pdf. Federal Bureau Investigation. Federal Bureau Investigation's Elder Fraud Report 2022.
[2] https://www.aging.senate.gov/imo/media/doc/aging_committee_fraud_book_20221.pdf. Fighting Fraud: Top Scams in 2022. US Senate on Special Committee on Aging. September 22, 2022
[3] https://www.ftc.gov/system/files/ftc_gov/pdf/p144400olderadultsreportoct2023.pdf Federal Trade Commission. Protecting Older Consumers 2022–2023 A Report of the Federal Trade Commission. October 18, 2023.

Figure 2. Call Center Scams for older Americans (Retrieved from FBI[3])



AI amplifies the impact of scams, enhancing their believability and emotional appeal through personalization. Exploiting individual vulnerabilities, scammers utilize AI to tailor messages, creating almost indistinguishable voice clones with just a brief audio sample. Voice and face manipulation, coupled with emotionally charged content and adaptive responses, elicit urgency or familiarity, manipulating older adults' emotional responses and vulnerability. Notably, there's a surge in personalized scams like the "person in need-grandparent" and romance scams, where AI crafts convincing profiles and identifies emotional triggers through automated conversations.

Recognizing the growing role of AI in scams is crucial. While efforts to halt scammers are underway, a blanket ban on AI might not eliminate adaptive scams entirely. Instead, we should explore AI as a part of the solution.

AI as a solution to stop scammers and protect would-be victims

My research, centered on AI methods for healthcare fraud detection, draws parallels to combatting scams targeting older Americans. Industries, like credit card companies, have successfully used AI for fraud detection, denying suspicious transactions in real-time and collaborating with consumers for confirmation. However, health care fraud still incurs substantial losses as high as 10% of our annual health expenditures, which could mean more than $300 billion[4]. Hence, the name of my book: Statistics and health care fraud: how to save billions[5]. We have limited resources to analyze billions of transactions -Statistics and AI find the needles in the haystack and save taxpayer's money.

[4] https://www.nhcaa.org/tools-insights/about-health-care-fraud/the-challenge-of-health-care-fraud. The Challenge of Health Care Fraud. National Health Care Anti-Fraud Association.
[5] Ekin, T. (2019). *Statistics and health care fraud: How to save billions*. CRC Press.

AI's proactive role extends to monitoring online platforms and blocking potential scam attempts, with AI-based call-blocking systems and authenticity verification curbing scam calls. Yet, its true potential lies in collaboration, as seen in government health care programs. Initiatives like the "Medicare Transaction Fraud Prevention Act" advocate data collection and co-verification with beneficiaries, essential for integrating AI successfully, akin to credit card fraud detection. Responsible AI methods can facilitate personalized education campaigns, preserving privacy and ethics. For example, AI can flag atypical behavioral patterns, like sudden financial transactions, enabling tailored alerts and educational materials for older adults. Lastly, fraudsters are adaptive, and scams will evolve. Use of adversarial AI can help proactively limit scammers' abilities[6].

Acknowledging AI's imperfections, such as false positives, and addressing privacy concerns, is crucial. However, by constructing responsible AI systems, we can empower older Americans while navigating potential risks. This necessitates clear objectives and legal checks at the application layer of augmented intelligence.

Policy recommendations and future directions

Addressing the dual role of AI in both perpetrating scams and providing solutions to protect potential victims requires a multi-faceted approach. To effectively combat these evolving threats, collaboration among government agencies, tech companies, financial institutions, and consumer advocacy groups is crucial. Sharing insights and data to train AI models to detect and prevent these scams is pivotal. Including input from older adults in developing AI-driven tools and technologies to proactively detect scams and protect older Americans is also necessary.

In the fight against AI driven scams, awareness and AI literacy are critical weapons. Existing efforts that educate seniors on safe digital practices, such as the work of FTC Federal Advisory Council and the "Pass It On" campaign, can be enhanced to include AI related scams. It is safe to assume that fraudsters play the long game `and can combine doctored videos with stolen identity to build convincing synthetic identities.

There are ongoing efforts to establish oversight bodies or regulatory agencies responsible for monitoring and setting standards for the ethical use of AI. In the context of scams, clear disclosure of the use of AI in communication, marketing, and financial transactions, with a focus on protecting vulnerable populations such as older adults could be important. Knowledge of when one interacts with an AI based system, could help protect older adults.

Accessible support and reporting mechanisms such as toll-free "Fraud Hotline" are crucial against scams. AI based chatbots and communication channels can provide support outside the business hours or at time of need. AI also can make public scam awareness campaigns more impactful making them tailored to the needs of the specific older adults.

Conclusion

The interplay of AI and scams brings forth both challenges and opportunities. Striking a careful balance between fostering AI innovation and protecting vulnerable populations is paramount.

6 Ekin, T. (2023) Adversarial Outlier Detection for Health Care Fraud. 2023 AMCIS Proceedings. Panama City, Panama

Advocating for proactive and personalized AI-based supporting measures becomes crucial, recognizing the difficulty in recovering both lost finances and mental well-being after a scam. Prioritizing the enhancement of data and AI literacy among older Americans, and actively involving them in prevention and detection efforts, stands as a cornerstone.

Understanding the impacts of dynamic disruptions like AI will undoubtedly take time. As a realistic optimist, I find hope in ongoing advances, rigorous testing, and evolving regulatory frameworks. The collaborative efforts, I believe, will yield robust and trustworthy AI applications, fostering a safer environment for older adults.

Thank you for providing this platform to address a critical issue. Your work in safeguarding older Americans against scams and raising awareness is commendable. I eagerly welcome any questions or discussions the Committee may have.