

CAREER: Secure Voice-Controlled Platforms

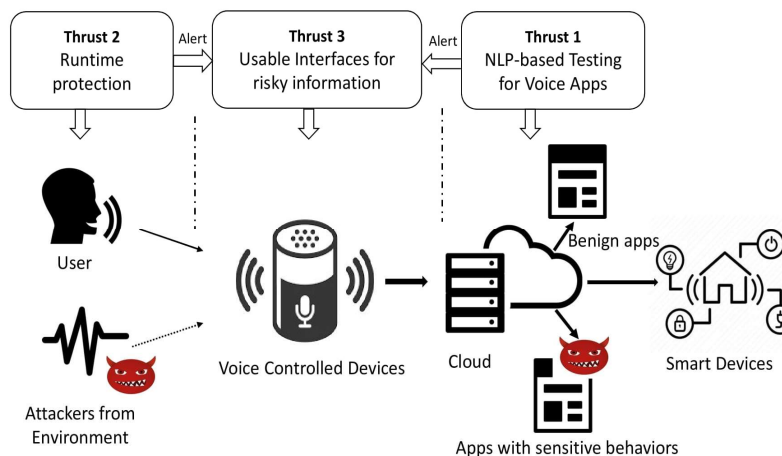


Challenge:

- How to design the voice-controlled platforms to protect users from security and privacy risks?

Solution:

- VAuth: a semantic-aware and context-based framework to protect user security and privacy in voice-controlled devices



Scientific Impact:

- Produce methodologies, and tools to rigorously design, and evaluate novel context-based security analysis techniques.
- The proposed research will create synergy between multiple domains including computer security, machine learning, software testing, and human-computer interactions.

Broader Impact and Broader Participation:

- This project will help improve the security and privacy for voice interface users.
- The PI will collaborate with major IoT device manufacturers and release education materials and tools publicly.
- The PI will recruit underrepresented students to join the research.

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