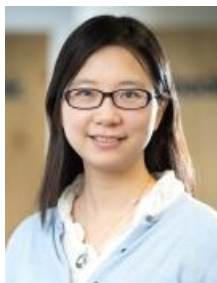**NSF Program (either CC or CICI): CICI**

Program Area: RDP

Award Number: 1920462

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Project Title: Enforcing Security and Privacy Policies to Protect Research Data

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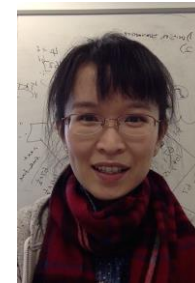
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Quad Chart for:

CICI: RDP: Enforcing Security and Privacy Policies to Protect Research Data

Challenge Project Seeks to Address:

- Disconnect between the documented policies (e.g., IRB policies, and privacy policies) and the implementations of a research project.
- Due to a lack of understanding and technical difficulties, a research project could deviate from policies, leaving out the protections and rendering research data vulnerable

Solutions

- Novel Natural Language Processing (NLP) techniques to extract security and privacy requirements from unstructured regulatory documents
- Novel program synthesis techniques that translate these requirements to code that can patch a program where it does not comply with the policies
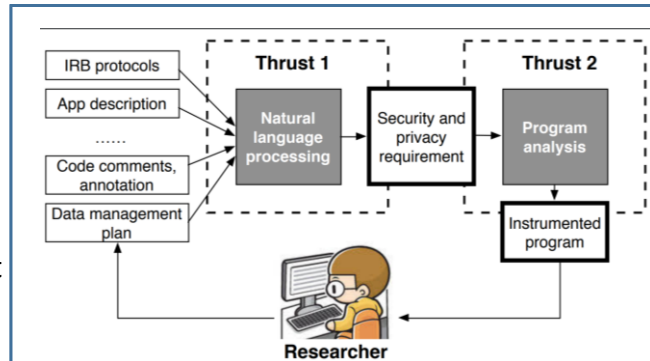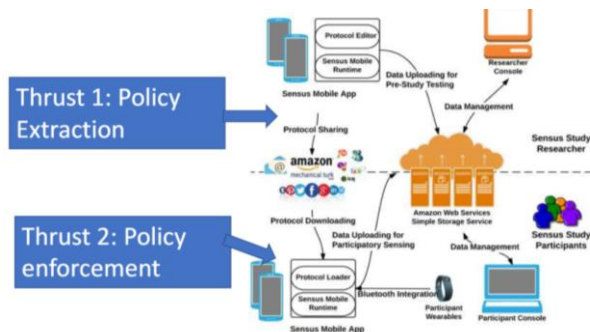

Figure 1: Policy enforcement framework

Figure 2: Overview of Testbed Integration

Broader Impact:

- Drastically reduce data leaks and malicious attacks
- Create educational materials for students to learn good security and privacy practice
- Disseminate our work and findings to research community and industry

Metadata tag:

- *Looking for motived students in the area of system security and NLP!*
- *Looking for collaborators in the area of Cyber Infrastructure!*
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