

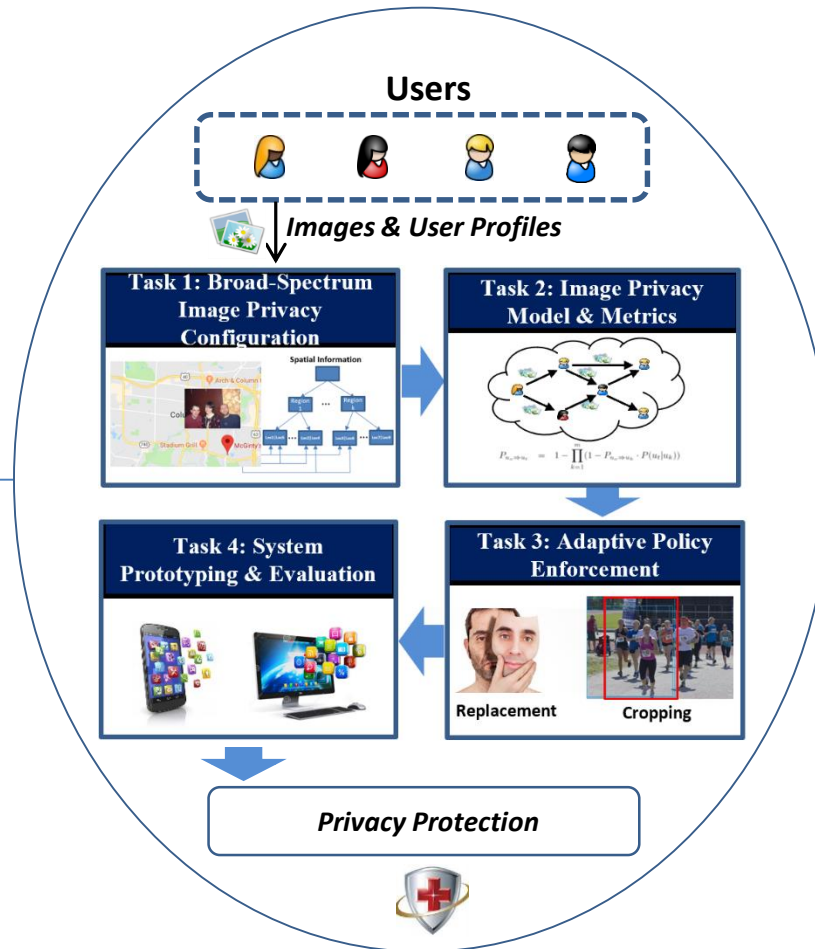
Broad-Spectrum Facial Image Protection with Provable Privacy Guarantees

Challenges

- Image sharing may unknowingly compromise privacy and security of human subjects in the background of images
- Image sharing may unexpectedly disclose someone's locations
- State of the art lacks a strong privacy enforcement mechanism

Solution:

- Broad-spectrum privacy policy language and system framework
- Image privacy threat model and metrics
- Adaptive privacy policy enforcement
- Person-image anonymization based on differential privacy



Scientific Impact:

- Offer formal privacy guarantee for multiple parties involved in social image sharing while maintaining important image qualities
- Advance image privacy enforcement techniques
- Enhance efficiency of privacy protection techniques in real world applications

Broader Impact and Broader Participation:

- Create a healthy and safe social networking environment
- Provide research training to students especially those from under-represented groups
- Summer security camp for K-12 teachers