SaTC: EDU: Collaborative: **IN**teractive Animated **VI**sualization and PracTice basEd **Cyber**security Curriculum and Training (**InviteCyber**) Framework for Developing Next-gen Cyber-Aware Workforce

Challenges

- Increased Use of Smartphones
- Skill Gap, cybersecurity ignorance
- Lack of nationwide high-school cybersecurity curriculum standards

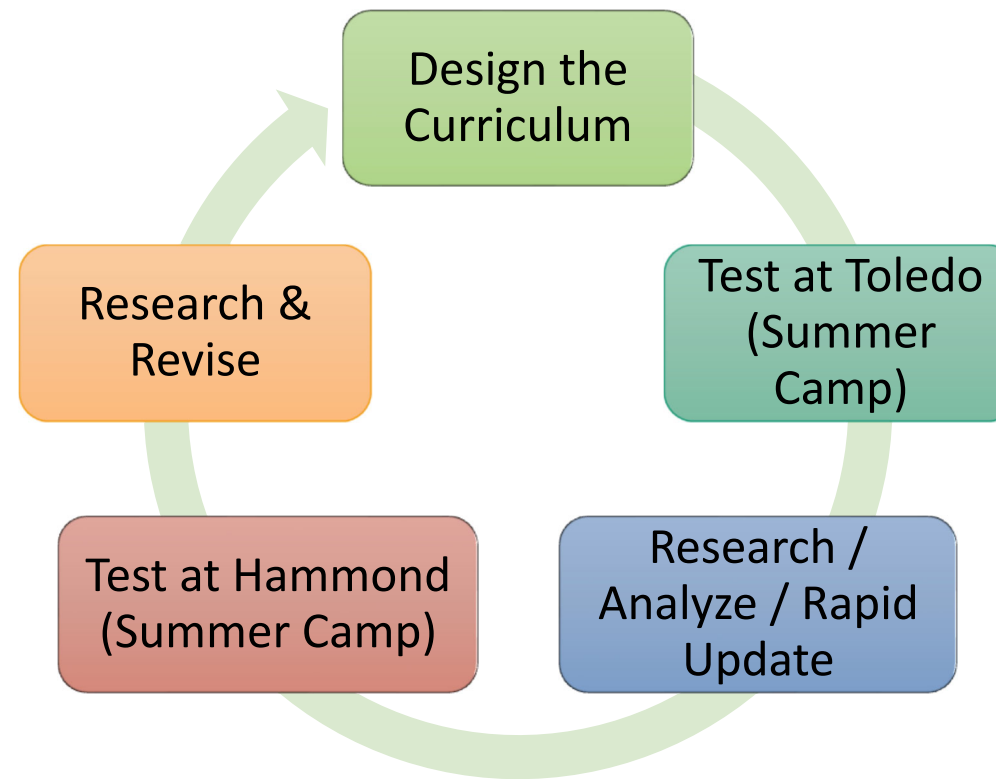## Solution

- Cybersecurity curriculum w/ smartphone app dev
- Accompanied with animated visualization based framework
- Enhancing cyber-awareness

Products

- Permission Educator App for Educating Users about Android Permissions: IHCI **2021**. (doi: 10.1007/978-3-030-98404-5_34)
- Practice-oriented Smartphone Security Exercises for Developing Cybersecurity Mindset in High School Students: IEEE TALE **2020**. (doi:10.1109/TALE48869.2020.9368440)

Rapid prototyping, testing, and revision (PTR) model

- Design the Curriculum
- Test at Toledo (Summer Camp)
- Research / Analyze / Rapid Update
- Test at Hammond (Summer Camp)
- Research & Revise

Scientific Impact

- Identify module/topic characteristics that interest students
- Evaluate curriculum quality
- Evaluate change in student perception and problem-solving

Broader Impact

- Two geographical areas of OH and IN directly impacted
- Possibility of wider adoption – material available on public website
- Address cybersecurity skill shortage (long term)

- An Introductory Visualization Aid for Cybersecurity Education: FECS 2019.
- Interactive Visualization based Mobile Security Education for Next-gen Cyber Aware Workforce: SaTC PI Meeting 2019.
- Website: https://sites.google.com/pnw.edu/invitecyber/home
- Website QR Code: