Benefits from a Novel Outreach Project that Supports Cybersecurity Professional Development at various Community Colleges in PA

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Project Overview 1/3

- This presentation discusses benefits of a recent outreach project to strengthen relationships between IUP and several Community Colleges (CCs) across Pennsylvania

- Indiana University of Pennsylvania (IUP) is an established CAE for two decades and has been working with several CCs for years to promote cybersecurity education and research in the western PA region

- Funded by the DoD, as a part of the Cyber Scholarship Program (CySP), IUP has extended its outreach efforts and built long-term relationships with several CCs throughout PA

Project Overview 2/3

- We provided engaging and highly rated professional development workshops in cybersecurity to faculty and students at the following six CCs and technical institutes across PA:
  - Westmoreland County Community College
  - Pennsylvania Highlands Community College
  - Laurel Business Institute
  - Laurel Technical Institute
  - Butler County Community College
  - Northampton Community College

- These workshops were delivered over 12 weekend days in academic years 2019-20 & 2020-21

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Project Overview 3/3

- The main goal of the project is to recruit qualified students into the cybersecurity field and DoD CySP

- This goal was achieved through increased faculty and student development in the field and a wider network/partnership with several CCs

- Our workshops were designed to ensure that participants will develop the following skills, abilities, and knowledge:
  - Faculty and students collaborate in assessing and resolving vulnerabilities in digital space
  - Faculty learn new cybersecurity teaching methods
  - Students acquire skills including programming, risk evaluation, software integrity checks through engaging hands-on activities
  - Faculty and students develop serious interest in cybersecurity

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Project Benefits and Impact 1/2

- We built excellent relationships with faculty and administrators at six institutions across PA

- We were able to provide well-received, cybersecurity professional development to about 120 faculty and students at six different institutions

- Our offerings continued to be engaging after the shift to online delivery, which has been shown in the participants' high ratings of all sessions

- Efforts in this project have facilitated ongoing collaboration work that involves about half of PA community colleges working with IUP to enhance cybersecurity and STEM education throughout the Commonwealth

Project Benefits and Impact *2/2*

- Sample evaluation from one of the offered workshops:
    - 100% of participants rated the usefulness of workshops with 4 or 5 out of 5 score where one is the least favorable and five is the most favorable
    - 100% of participants rated the presenter's knowledge in the subjects with 5 out 5 score
    - 94% of participants rated the interactivity in the sessions with 4 or 5 out of 5 score
    - 94% of participants either strongly liked or liked the "Raspberry Pi and Security Applications" session
    - 94% of participants either strongly liked or liked the "Defense Against the Dark Hat" session delivered by one of the guest speakers
    - 82% of participants either strongly liked or liked the "Social Engineering via Open Source Intelligence" session

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Conclusions 1/1

- Delivered 12 weekend full-day cybersecurity workshops to six different institutions across PA

- Trained about 36 faculty at various CCs and technical institutes

- Trained over 80 students at these six CCs and technical institutes

- Built enduring relationships with faculty and administrators at six institutions across PA

- Established a pathway for students from these CCs to continue their studies at IUP and other CAEs

- Published project activities and documents on its site