Role of Academe in Cybersecurity Human Resource

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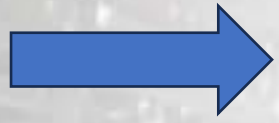
Cyber Security Skills Gap

Professionals



Skills Gap

Industry Workforce

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Role of Academe in Filling the Gap in Cybersecurity Workforce

Academe

Students

Professional Job

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Philippines Settings

- Philippines, 4th most attack nation in the world
- Recorded cyber attacks (2020-2022) half government sites
- In the Philippines, few programs and educational institutions offer specialized cybersecurity training and education. As a result, there is a significant gap between the skills and knowledge required for the job and the skills and knowledge many candidates possess.
- 200,000 needed, 300 professional are working in cyber security (DICT source)

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Career Pathway

Bachelors Degree
BS Cyber Security
Or any IT Degree

Masters Degree
Only 1 University
offers the
Program
PSM Cyber Security

Doctoral Degree
Doctor of Science
In Cyber Security

Training Courses
And Certifications

Certifications

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Holy Angel University Cyber Security Program

- Professional Science Master's Cyber Security (PSM Cyber Security)
- Offered in 2018 and development under partnership with USAID STRIDE (Science, Technology, Research, and Innovation for Development) program.
- BS Cyber Security (4 yrs.), offered in 2020
- BS Cyber Security 3+2 (Bachelors → Masters) , offered in 2020

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Developing the Curriculum

USAID FROM THE AMERICAN PEOPLE

RTI INTERNATIONAL

SCIENCE, TECHNOLOGY, RESEARCH AND INNOVATION (STRIDE)

INDUSTRY PARTNERS

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Training the Faculty

- Training the faculty in teaching cybersecurity is a crucial step in ensuring that students receive an education that is current, relevant, and effective.

Cyber Security Curriculum

- The cybersecurity curricula using was develop using NICE Framework
- Creating a robust skill framework for a cybersecurity curriculum is essential to ensure that learners are equipped with the knowledge and competencies needed to excel in the field.

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Students Needs

- **Foundational Knowledge**
- **Core Cybersecurity Skills**
- **Threat Intelligence and Analysis**
- **Soft Skills**
- **Legal and Compliance**

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Hands-On Experience

- **Simulated Environments:** Engaging in war rooms or cybersecurity labs to simulate real-world attacks.
- **Internships:** Gaining real-world experience in corporate or governmental cybersecurity roles.
- **Case Studies:** Analyzing past security breaches to learn and adapt.

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Cyber Range

Capture-the-flag

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Industry Partnership

Industry partnership in the realm of cybersecurity education and training is of paramount importance for several compelling reasons:

1. Relevance of Curriculum
2. Practical Exposure
3. Resource Sharing
4. Joint Research and Development
5. Faculty Development
6. Career Opportunities
7. Workshops and Seminars
8. Feedback Loop
9. Funding and Grants
10. Setting Standards

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Degree programs vs. certifications: Which is more effective?

- The effectiveness of degree programs versus certifications in the cybersecurity domain depends on specific goals, career stages, and individual needs

Nurturing Skilled and Capable Cybersecurity Professionals

- Regular Training & Workshops
- Certification Programs
- Simulated Cyber Attacks
- Mentorship Programs
- Scholarship & Education Sponsorships
- Continuing Education
- Collaboration & Networking
- Wellness & Mental Health
- Clear Career Pathways
- Competitive Compensation

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Summary

- The cybersecurity skills gap is a pressing concern, leaving organizations vulnerable to threats and hindering technological progress. Central to addressing this gap is the academe.
- The academe is a beacon of hope, driving initiatives and programs that mold, inspire, and equip the next generation of cybersecurity professionals.
- An effective cybersecurity curriculum is pivotal in producing skilled students ready to face the evolving digital threats of our age and become a part of the cyber security human resources.

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