





**Commonwealth
Cyber Initiative**

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CCI Experiential Learning Research

RADFORD
UNIVERSITY



CivilianCyber



Bobby F. Keener, Jr.

CivilianCyber

bobby@civiliencyber.com

Dr. Jeff Pittges

Radford University

jpittges@radford.edu

Dr. Deri Draper-Amason

Old Dominion University

ddraper@odu.edu

Introductions



Background

The Problem

Understanding the challenge

- 99,000 Job Openings in the DMV (9/21/2022)
- College Graduates are not Workforce Ready
- Soft Skills and Application of Knowledge top the list
- Internships have value but may fall short
- Employer engagement is confusing and non-optimal
- 99.9% of companies are small or micro businesses



The Objective, Goals & Approach

Improve the outreach, identification of potential, and associated upskill/reskill opportunities to increase successful participation in the cyber workforce

Goal One

Increase and improve student experiential learning opportunities

Goal Two

Increase employer awareness and engagement in experiential learning initiatives and resources

Goal Three

Improve the overall workforce pipeline for high-demand STEM careers

The Approach

Public, private and educational sector research projects/pilot implementations

The background is an abstract, low-poly geometric pattern in various shades of blue. The shapes are irregular polygons that create a sense of depth and movement, resembling a crystalline or architectural structure. The colors range from a deep, dark blue to a lighter, almost white-blue, with some areas appearing more translucent or reflective.

Research and Engagement

Projects

Real World Engagements

1. iDISPLA: The Innovative Discovery Platform (2019) (Department of Defense)
2. Leveraging AI and Machine Learning to Develop New CPSS and Workforce Development Solutions (2020) (COVACCI)
3. STEP: The STEM Training Education Program (2020) (SWCCI)
4. Experiential Learning: Continuous Improvement Advisory Board (CCI) (2021)
5. Develop a Gamified Mobile Application for Cybersecurity Education and Assessment via a User Centered Design Process (2021) (COVACCI)
6. TEIM: Technology Enabled Internships with Mentoring (2022) (SWCCI)
7. SEIC: The Student Entrepreneurial Ideation Challenge (2022) (SWCCI)



Welcome to the Workforce Innovation Network

The Student Entrepreneurial Ideation Challenge

We are very excited to kick off this exciting program in partnership with the Southwest Node of the Commonwealth Cyber Initiative and appreciate their sponsorship. As team members, you have been charged with not only defining the cybersecurity challenge, but now it's your turn to come up with some exciting solutions. We believe that these solutions will provide long term benefit not only to the Commonwealth, but to the organizations that are faced with multiple cybersecurity challenges every day. The top team will not only earn recognition for submitting a workable solution and a unique opportunity to showcase your skills and talents to future employers. In addition, the top team will earn a \$2,000 cash prize. The second-place team will earn a \$1,000 cash prize. The third-place team will earn a \$500 cash prize. Good luck.

Solutions to Enable Small Business to Prepare for, Identify and Defend Against the Largest Cybersecurity...

While we are all familiar with the growing number of cyber attacks and data breaches that affect large organizations and governmental agencies – the threat to small businesses is even greater. Today the almost 32 million small businesses (SMBs) in the US are continually being challenged with how to protect their companies and employees, with approximately 40% reporting that they experienced an attack in the

Participation

Engaging Virginia's Education, Public and Private Sectors



- Small, Medium and Large Businesses
- Two- and Four Year Institutions and K-12
- Federal, State and Local Government
- Technology, Arts/Design and Business
- Representation from all Virginia Regions
- More than 100 Learners: Apprentices, Interns & GAs

Key Learning Approaches

Aligning approaches to outcomes

- ❑ Industry Engagement
- ❑ Career Exploration
- ❑ Self-directed Learning
- ❑ Mentorship
- ❑ Learning Coaches
- ❑ Peer Learning

TABLE 1: Alignment between projects and key learning approaches

	Industry Engagement	Career Exploration	Self-directed learning	Mentorship	Learning Coaches	Peer Learning
1. iDISPLA	Green	Yellow	Orange	Blue		Purple
2. Assessment	Green	Yellow				
3. STEP	Green	Yellow	Orange	Blue	Yellow	Purple
4. Advisory Board	Green					
5. Gamified App	Green	Yellow	Orange	Blue		Purple
6. TEIM	Green	Yellow	Orange	Blue	Yellow	Purple
7. SEIC	Green	Yellow	Orange	Blue	Yellow	Purple



Going Forward

Preliminary Indications

Multi-modal Engagements

1. Mentoring should be done on both a technical and professional level
2. Mentoring provides a deep impact to student workforce readiness
3. Mentor time commitments can be extremely low and still achieve desired impact
4. Organizations and professionals want to engage but require a more structured approach
5. Combining multiple approaches enhances the impact of each individual approach
6. Leveraging “wide net” participation strategies increases overall program effectiveness, naturally enhances DEI, and increases the overall quality workforce pipeline

Workforce Successes

Making a difference



Geneva Blackwell

A Navy veteran, Geneva worked in a number of sales positions at car dealerships. After completing the program, she secured a position as a Senior Technical Specialist/Business Development at AIS Networks, Virginia's eGov Services provider. She felt this was all possible due to the experience she was able to gain during the program.



Phuc Nguyen

Originally from Vietnam, Phuc had pursued an education in IT and cyber security and graduated from Virginia Commonwealth University (VCU) soon after joining the program. After completing his apprenticeship at ASI Network, he was recruited by his alma mater as a Network Specialist in the VCU Computing Center.



Kurtis Dennis

Kurt recently graduated from Old Dominion University with a Masters in Cybersecurity. He served his apprenticeship with CivilianCyber working on a number of projects. After completing the training, he was able to secure a full-time position as an IT Analyst in the Geico Insurance Emerging Leader program.



Faith Weems

Coming from a rural background, Faith had bounced between several low-level admin roles at local banks. When she completed the program, she was able to land a position as Engineering Program Compliance Coordinator at Moog, Inc. an aerospace defense contractor.

Thank you!

For more information, please contact us...

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