Cybersecurity Workforce Alliance (CWA)

Transforming the Next Generation Cybersecurity Workforce

WORKFORCE RISK & MOBILITY
Empowering Employees, Students and Their Careers

Wharton: How America Is Closing the Skills Gap
Cybersecurity Workforce Alliance (CWA) Overview

- Dedicated to scaling/accelerating the supply of workforce ready, entry-level, cybersecurity professionals
- Semester-long virtual internship w/cyber SMEs mentoring students; piloting shortly virtual cyber apprenticeship program
- Expose students from all majors to cyber—careers/academic discipline; liberal arts majors w/critical thinking & business majors w/analytical
- Students, Higher Education & Industry aligned on our program & mission—over 800 members, worldwide
- CWA not an abstract theory: proven model w/data to show results
- Have a best practice, worthy of broader adoption
• “Industry First” Approach: accelerates training/preparedness of students
• Industry SMEs developed real-world case studies into two survey level courses
• NIST cybersecurity framework foundation of curriculum: taxonomy, roles, role profiles, skills/proficiencies, etc.
• Students work on teams pursuing these case studies—developing/enhancing soft skills
• Mentors (volunteer industry SMEs) guide/counsel teams virtually once a week—rolling semester long interview
• Measure/assess both team & individual performance/progression; mapped to NIST framework
• Now over 500 CWA student alumni; CWA alumni now working in cyber
CWA Mentors

- Volunteer one hour/week/semester mentoring student teams virtually
- Real-time knowledge transfer from these SMEs to students; not theory based

**Founding Members**

- Federal Reserve Bank NY
- Morgan Stanley
- Goldman Sachs
- Bank NY Mellon
- Fidelity Investments
- Deloitte & Touche LLP
- Capgemini
- Auto Club Group (AAA)
- JPMorgan Chase
- Express Scripts

- Citizens Bank
- US Bank
- FS Roundtable
- Fidelity
- Bank of America
- American Express
- Standard Chartered Bank
- Dilworth Paxson
- RANE Network

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CWA Results

• 401,000 pageviews
• 8:41 mins/session
• 9.5 pages/session

Context: May 2017: 1.9 million U.S. Students Graduate Only 15% get jobs or internships (Wall Street Journal)

- 99% ENTER THE CWA COURSE NOT AWARE OF CYBERSECURITY AND CAREER OPPORTUNITIES
- 95% NEVER HAD ANY REAL-WORLD EXPERIENCE ALIGNED WITH THEIR MAJOR
- 61% OF CWA ALUMNI - CURRENTLY ENROLLED HAVE PART-TIME CYBERSECURITY JOBS
- 33% OF CWA GRADUATES HAVE FULL-TIME CYBERSECURITY JOBS

100% are Cyber Aware with mentored, team-based, work readiness experience

COMPARE USA MILLENNIALS vs CWA ALUMNI PAY SCALES

National Pay Scales

CWA Alumni Pay Scales

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CWA Results

• CWA alumni now inspired to align their career/passion, based on real-world experience
• Students have industry driven, skills-based assessments, all based on NIST roles & role profiles
• The ROI for underwriting a team/class is >5x, based on very conservative assumptions:
  ➢ CWA hires come w/3-6 months equivalent work experience;
  ➢ Training time & resources, reduced significantly;
  ➢ Recruiting fees virtually eliminated through mentoring; &
  ➢ Time/resources to hire, also reduced significantly through mentoring;
• Have a best practice, proven solution, to generate entry-level cybersecurity professionals for you & your firm/company
iQ4 Applied Learning Platform

• Turnkey, open source, enterprise level platform—extends workplace into classroom & provides customizable, project-based curriculum to measure student performance/progression
• Automated NIST taxonomy to NIST cyber roles/skills & matched KSAs to those same roles; no other sw/tech company worldwide does this
• Not a LMS like Canvas or Blackboard
• Angular front-end/Java & Grails back-end/all Svc Oriented Architecture/operates as SaaS/use Amazon Web Services in the secure cloud
• Platform contains all the program content for students & mentors—a managed service for colleges/univ
• Includes our Skills Passport, which validates a students academic and applied learning for cyber employers
Why the CWA Works:
A Win/Win and CONVERGENCE For All Parties Concerned

- Students win: knowledge/experience from virtual cyber internship
  attractive entry-level cyber jobs/careers
- Higher Ed wins: scalable engagement w/employers & alumni
  differentiate from other colleges
  proactively combine academic & applied learning
- Industry wins: create a pipeline of cyber entry-level hires
  reduce the cost & time of hiring and training, new hires
  >5x return on underwriting a class/team & providing mentors
- Your Nation wins: promote economic growth & national security
  address an acute & critical workforce shortage
Why The CWA?

• Pioneered the technology & model for Industry & Higher Ed engagement to address cyber entry-level, workforce shortage

• Proven results

• Have both experienced leadership & enterprise-level platform required to scale rapidly

• Cyber skills gap increasing exponentially, every day: ransomware, AI, IoT, autonomous vehicles, etc. Economic growth/national security at risk.