

## IT & Cybersecurity Sector

### Summary of key themes, needs, and opportunities: June 2025

Prepared by Computing for All (CFA)

#### (1) What are the top 3-5 themes you hear from employers in your sector related to workforce development

- Employers are looking for **experience**: most entry-level jobs require 1-3 years of experience which students coming out of college degree programs don't have. It is important to build in experiences that offer students opportunities for work-based learning such as capstone projects, hands-on project work, Career Launch internships, and apprenticeships.
- Employers also ask for **soft skills** such as collaboration, problem-solving, communication, etc. Many employers have told us that these are more valuable than tech skills, which they can teach. These are important, as most tech jobs require you to work in teams and collaborate with others. Students can be trained in these skills via the work-based experiences mentioned above.
- Many smaller employers need **funding to pay for interns** as well as the cost of running an internship program. Many employers would take on interns, but they cannot afford to pay them and/or the cost of managing the program.
- **Industry credentials** for certain roles such as CompTIA A+ for entry-level Customer User Support roles are very important.
- **Significant demand for Tech roles in non-tech industry: Healthcare, Finance, Manufacturing etc. and Public Sector**: Data shows that over 60% of tech roles are outside the tech sector. This is an area where we will dig deeper by developing partnerships and strategies with sector leaders to reach their employers looking to hire tech talent. Similarly, we will develop strategies to engage specific groups of employers such as public sector, staffing companies, startups and others.
- **AI is here!** Employers are looking for applicants with AI skills in hiring for tech roles. We are focusing on understanding how Generative AI is impacting the tech pathways prioritized in the sector strategy and how those AI skills can be adopted into career pathway programs in high school and colleges, as well as what career readiness skills students need to be prepared with.

#### (2a) What are the 3-6 occupations that employers in your sector indicate should be high-priority for workforce development to help meet their hiring needs?

- Computer User Support Specialist/Cloud Support Engineer
- Data Center Technician
- Software Developer
- Cyber / Information Security Engineer
- Data Analyst

Regarding AI, we will focus on the impact of AI skills on all the pathways above. Over half of data-related job postings request AI skills, while around one in five software development roles do the same. In contrast, AI skills are less frequently required for IT, cybersecurity, and business intelligence positions. We also need to keep an eye on a growing entry-level role for **Artificial Intelligence Engineer**, which includes the job titles: Machine Learning Engineer, Natural Language Processing

Engineer, and Generative AI Engineer. Of the Machine Learning Engineer job postings over the past year in WA for entry-level, **60% are looking for a bachelor's degree**, and 23% are looking for a masters. We should talk to companies seeking a bachelor's degree for this role to see if there is a need for creating a Bachelors pathway in ML in WA.

We should consider exploring an emerging entry-level occupation from the Business and Management sector, **Business Intelligence Analyst** (within the context of our existing high priority occupation, Data Analyst) as it is slated for a high level of AI transformation.

**(2b) Which career connected learning programs are effectively meeting the hiring needs of employers in your sector?**

- WABS Job Shadows and Tours (King/Pierce region)
- Data Center Career Launch (Grant County)
- Mentors in Tech (MinT) Career Prep, and mentoring programs (across WA state)
- Data Analytics Career Launch WSU (across WA state)
- Per Scholas, Skillspire, Year Up, Ada Developers Academy, Vets2Tech training programs (King/Pierce region)

**(2c) Which career connected learning programs could be adjusted, expanded, or scaled to other regions to meet the hiring needs of employers in your sector?**

- WABS Job Shadows and Tours (King/Pierce region) is a great program to introduce students to careers in IT. This should be expanded across the state.
- The T-Mobile Explorer Prep Career Launch program is on hold.
- Mentors in Tech (MinT) Career Prep to prepare CTC BAS students for additional tech roles
- Mentors in Tech (MinT) mentoring program for college students
- CFA CAST Career Launch (IT Support) and Full Stack Software Development Career Prep programs can be expanded to regions across WA state where there is demand for these roles. These are the two fastest growing occupations in IT in our state.
- WSU Data Analytics Career Launch and Career Explore play shops for elementary school children
- Scaling training provider programs such as Per Scholas, Year Up, Skillspire, Ada Developers Academy and Vets2Tech training programs to meet employer demand to fill the gap till the education system can catch up.
- Scaling IT programs to rural regions.
- Hands-on real world project experiences built into pathway programs such as those provided by CodeDay Labs and Riipen.
- CFA Career Readiness workshops and access to job fairs to prepare students for careers in IT.
- North Central ESD Tech and Tiaras event for middle school girls to spark their interest in technology careers.
- Code.org's Hour of Code should be available in every school in WA state. This is an essential introduction to coding to develop an interest in students.
- Microsoft Discovery High School internship program in partnership with CBOs should be scaled as a model for other employers

**(2d) Which career connected learning programs should be developed to meet the hiring needs of employers in your sector?**

- **Youth Apprenticeships:** We need to develop youth apprenticeships in IT pathways in

partnership with K-16. The IT apprenticeship program provider, Apprenti, is targeted towards older candidates. Apprenticeships have been proven to be a successful model to address the lack of diversity. Registered apprenticeships offer opportunities for individuals without college degrees to learn new skills while getting paid, as well as cultivate a professional network and gain access to living-wage jobs.

- **Programs and approaches that embed project experience:** Hands-on real world project experiences need to be built into pathway programs. For example, employer-led education pathway collaborations such as Globant's partnership with Miami Dade college to place student interns into projects with clients is an effective model. CodeDay and MinT offer mentoring and project experience to students in BAS programs. We need to partner with industry organizations to bring more employers to the table to offer work-based learning opportunities to students. For example, we have developed a program with WTIA to help their startup members find interns.
- **Cross-sector programs:** Cross-industry and cross-Sector Leader program approaches are needed. For instance, there are opportunities in Finance, Healthcare, Aerospace, Manufacturing, CleanTech and Life Sciences to connect employers hiring for IT jobs in these sectors and to build cross-sector pathways for IT careers in these sectors.
- **Impact of AI:** We need to evaluate the impact of AI on tech pathways, offer guidance on AI skills for these pathways, and determine if we need a dedicated Artificial Intelligence Engineer pathway.

### (3) What are the top 3-5 approaches you recommend to increase participation of underrepresented students in your sector's high priority occupations?

- **Access for students in rural areas:** Students in rural areas are being left behind from access to technology pathways as often the schools cannot find teachers to run the program or do not have enough resources to offer the pathways. For rural areas, we need to deliver programs virtually to reach students. This addresses the teacher shortage issue as well.
- **Youth Apprenticeship:** Apprenticeships have been proven to be a successful model to address the lack of diversity. Registered apprenticeships offer opportunities for individuals without college degrees to learn new skills while getting paid, as well as cultivate a professional network and gain access to living-wage jobs. We need to develop youth apprenticeships in IT pathways in partnership with K-16.
- **Implement comprehensive career explore and prep programs** within the K-12 education system to provide students with early exposure to opportunities in IT. This may include implementing curriculum activities within the classroom, organizing site visits and tours to provide students with interactive and hands-on experiences, facilitating internships, and offering ongoing mentorship opportunities with industry professionals.
- **Representation Matters:** We need to provide access to BIPOC speakers and mentors from the tech industry to students. It is important that students see people who look like them in these roles. This builds confidence, inspires students, and allows them to start seeing themselves in these types of positions.
- **Partnering with CBOs:** We need to partner with CBOs that serve BIPOC students to bring these students into Career Launch and training programs to give them the training and supports to place them into good paying IT jobs.
- **Career Readiness workshops and job fairs:** We need to offer workshops ranging from exploring careers in tech, to resume and interview prep, Linked In, networking, job fairs, emerging technologies such as AI, and more. For example, [AI workshop series](#).