

CompTIA.

advancing
the business
of technology



CompTIA.

advancing
the business
of technology

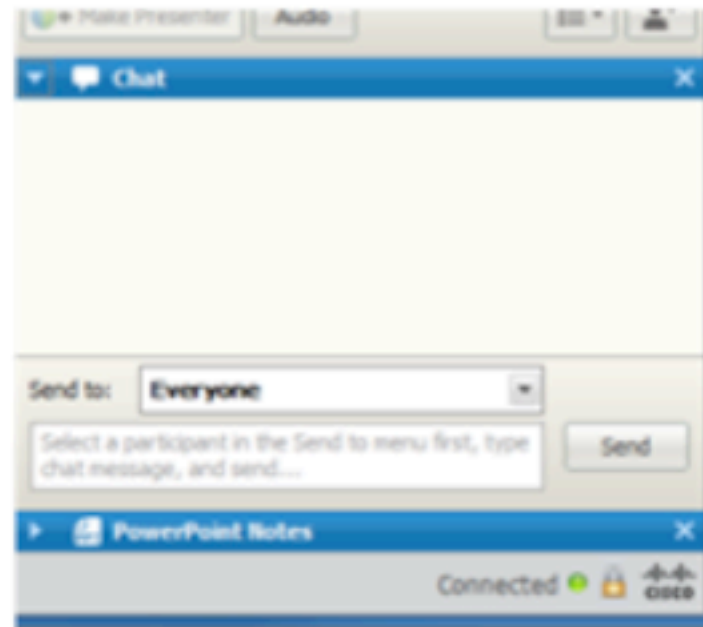


The Gap: Women In Cybersecurity
Tuesday, February 19, 2019

**An AWIT and IT Security
Community webinar.**

Housekeeping Notes

- Your microphones are in mute.
- We will have a Q&A session at the end of the webinar, please place your questions in the panel box to the right.
- If you have questions after the webinar, please contact kmartin@comptia.org



CompTIA.

Who We Are

CompTIA is a global IT trade association and the voice of the industry

Our Mission

Advance the IT industry

Technology is infrastructure, just like roads and bridges. Our country's economic growth, national security and quality of life depend on it. When we help tech businesses grow and help build a skilled tech workforce, we make that infrastructure stronger

Who We Serve

Tech executives, tech professionals, tech educators, and anyone who may be interested in a tech career

How We Do It



Learn more at [CompTIA.org](https://www.comptia.org)

CompTIA Ecosystem

Councils



Communities



* CompTIA Communities and Councils are the foundation of the Association's initiatives, programs, education and research.

The Gap

- Estimates indicate women make up between 13-18% of the cybersecurity workforce.
- Cybercrime will more than triple the number of job openings over the next 5 years. (Cybersecurity Ventures 10/23/18)
- Cybersecurity Ventures predicts there will be 3.5 million cybersecurity job openings by 2021.
- We have to consider alternative paths to filling the pipeline:
 - Engaging girls in middle school
 - Vocational or skill based education
 - Apprenticeship, Internship, and Co-Op programs
 - Certifications



Jennifer Carlson



Executive Director
WTIA Workforce Institute



New Workforce in Tech via Apprenticeship

February 19, 2019

ApprentiCareers.org





The Solution



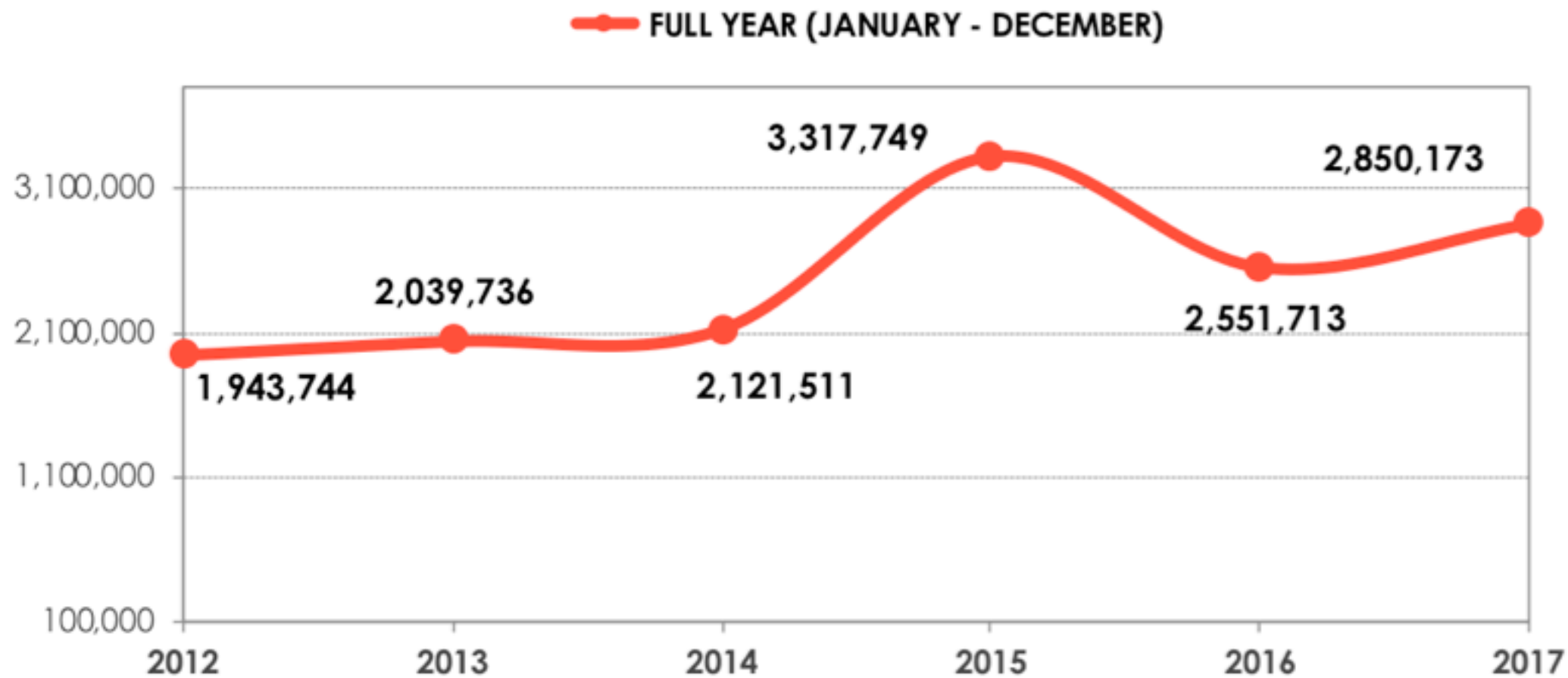
- Piloted by Washington Technology Industry Association, in partnership with the Washington State Labor and Industries Department & US DOL
- **Registered Apprenticeship** program for careers in technology
- Built by industry to fill its workforce gap and increase diversity of tech workforce (emphasis on women, minorities, veterans and disabled)
- Based in Seattle, operating nationally
- 501c3 non-profit organization



Why does the US need Apprenticeship?

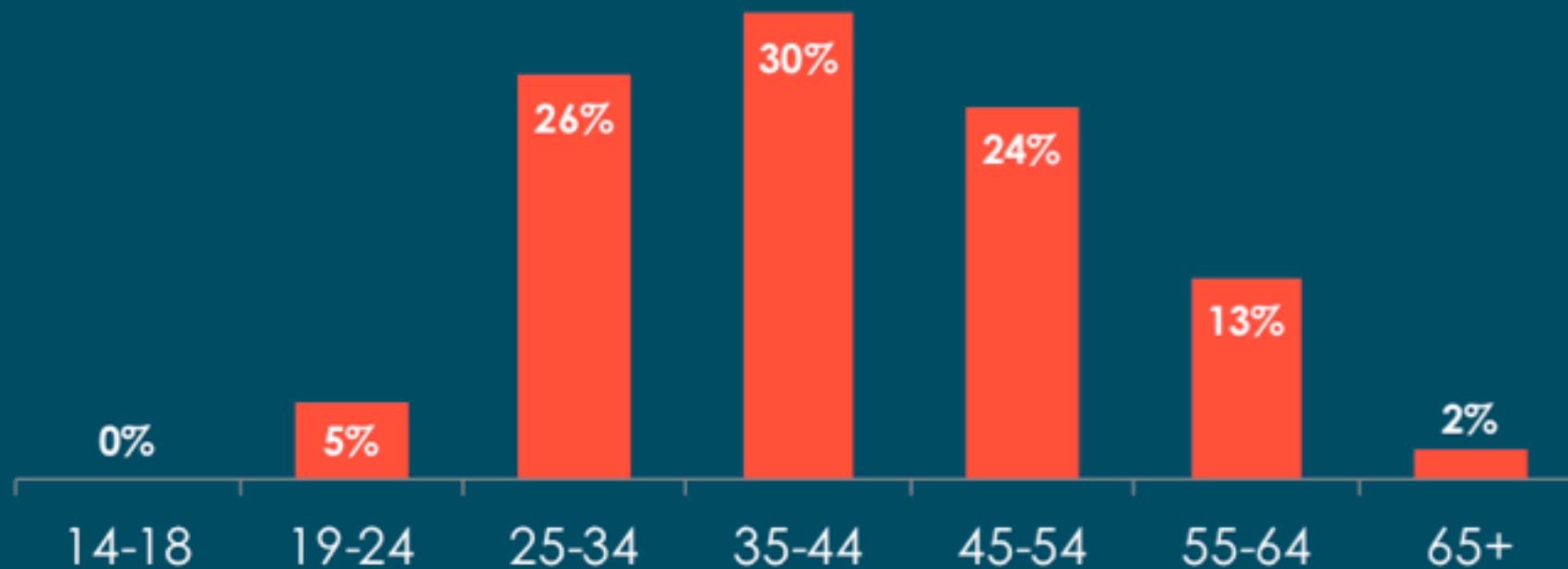


Total Number of Core IT Job Posting Unfilled Nationally – All Companies





U.S. IT Workforce Age Demographics





The path, the plan, your career in tech.



How did we get here?

Funded by US Department of Labor and tech sector to develop a uniform apprenticeship program as sole IT Sector Lead

Significant skills gap
between accredited
education and tech
hiring needs

In the U.S., 1:20
job openings is a
tech job

1:7

Focus on jobs that can be
filled by accelerated or
work based training

40/50/10



Value Proposition



Benefits of Apprenticeship



FOR COMPANIES

- Protected wage differential while learning on the job
- Cost-effective access to pre-screened, diverse talent
- Competency assessment includes math, logic & critical thinking, emotional intelligence; lowers risk on company investment
- Technical training delivered prior to beginning 1-year of on-the-job training
- Apprenti manages talent pool and all state and federal compliance, reporting

FOR APPRENTICES

- Competency and time-based pathway to strong IT career to accelerate career
- Living wage with benefits and subsidized training
- Company supported mentorship while on the job to ensure success
- Standardized, portable, skills & credentials



Current Occupations & Training



Cloud Operations Specialist 1 and 2

CompTIA Network+, Linux+, Python/SQL (and cloud service certification for level 2)



Network Security Administrator

Cisco CCNA Security



Web Developer

HTML/CSS, SQL, JavaScript, web app frameworks



Software Developer 1 and 2

HTML, JS, primary language stack (e.g., C#, Java, Python), computer science basics



Systems Administrator

Linux LPIC 1/2 or Microsoft Windows Server MCSA



Technical Sales Specialist

Content depends on employer need



Data Center Technician

CompTIA A+, Network+, Linux+



IT Support Professional

A+, Net+ or Cisco CCENT, LPIC1 or Microsoft Windows MTA



IT Business Analyst

ITIL Foundations, SQL, Linux+, Tableau

DBA & PM Filed. Additional occupations are in development.

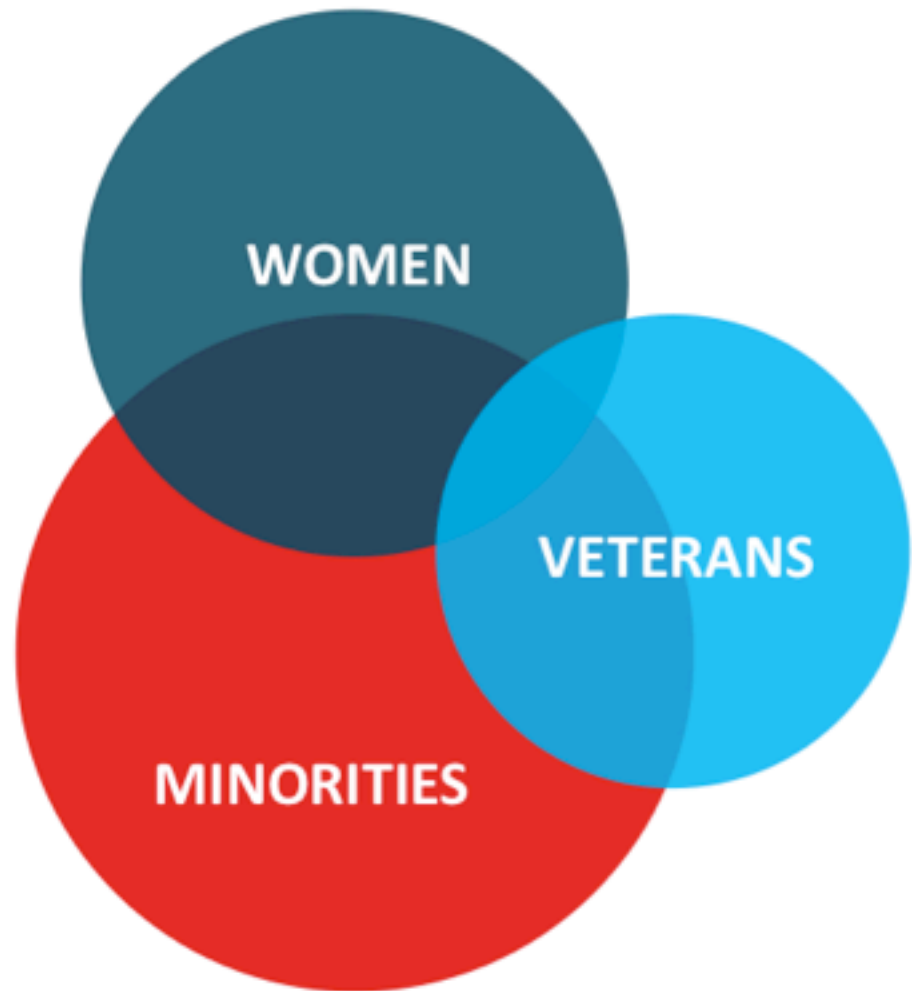
(Data Analyst, QA, Cyber Analyst & Dev Ops)

Apprenti can also file new occupations and build specialized programs.



Pilot Applicant Demographics

APPLICANT POOL 10,628

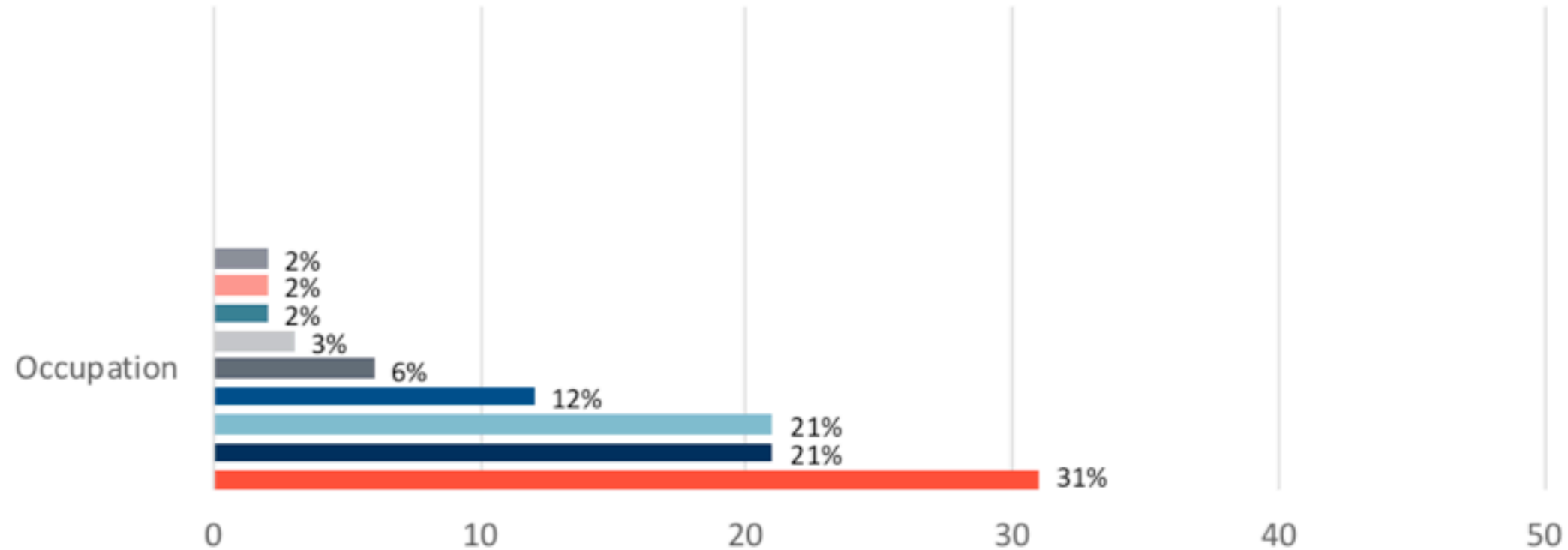


Women:	3253	Minorities:	5954
Veterans:	3389	Non-Targeted:	1986



Women in Apprenticeship Demographics

Occupational Role Placements%

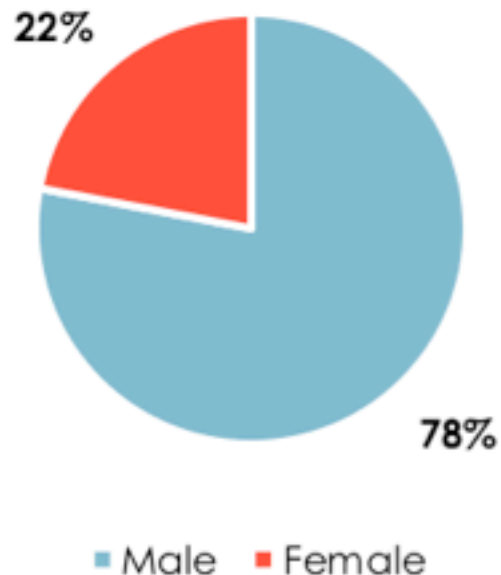


- Network Security Administrator
- Other
- Web Developer
- Technical Sales Specialist
- Network Operations Developer
- IT Support Professional
- Data Center Technician
- Cloud Operations Specialist
- Software Developer



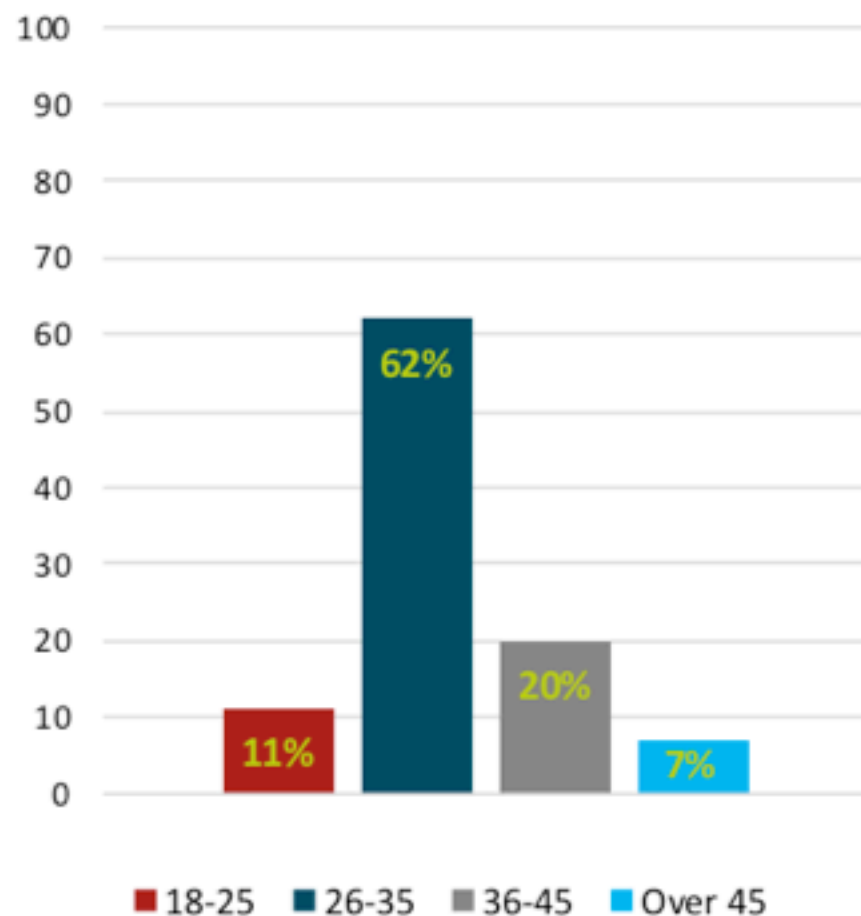
Current Apprentices Demographics

GENDER

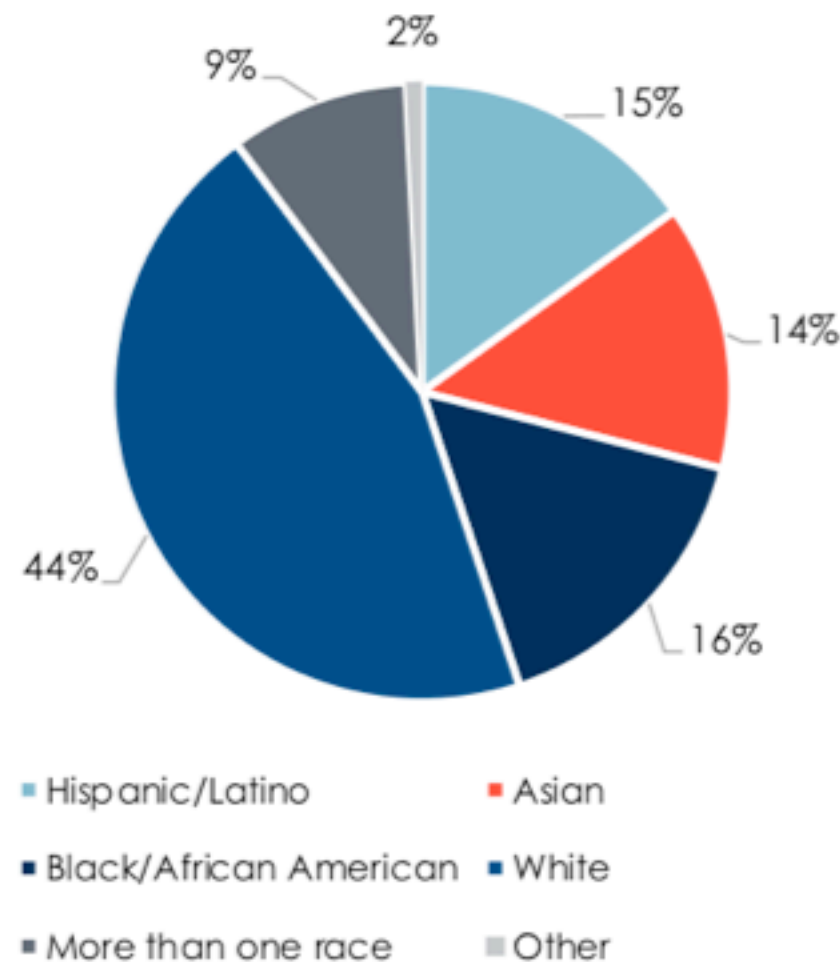


If one employer, focused on Veterans, is excluded, Women become 34% of our apprentices

AGE



RACE





Current Apprentices Data



▶ Median Salary of Previously Employed:	\$30,275
▶ Unemployed Prior to Apprenti:	22%
▶ Median Salary of All Prior to Apprenti:	\$28,370
▶ Median Salary in Apprenticeship:	\$51,000
▶ Median Retained Salary:	\$78,000
▶ Early Retention	84%
▶ College Degrees	54%
▶ Median Apprentice Age:	32
▶ Youngest Placed:	18
▶ Eldest Placed:	63



Who hires tech apprentices?

WASHINGTON

- Microsoft
- Amazon
- F5
- Concur
- Silicon Mechanics
- Avvo.Com
- ComTech

MASSACHUSETTS

- Wayfair
- Kronos
- PTC
- Cengage
- Carbon Black
- Harvard University IT

N. CALIFORNIA

- SAP
- VMWare

ATLANTA CHICAGO DALLA VIRGINIA

- Amazon

SE MICHIGAN

- One Magnify
- QuickenLoans – DA Test

OHIO

- Huntington Bank
- Kroger
- Proctor & Gamble
- Great American
- UC Health
- Cincinnati Bell
- TriHealth
- JPMorgan Chase

NASHVILLE

- Change Healthcare
- Asurion
- Bank of New York Mellon
- Eventbrite
- Ingram Content
- Lifeway
- Teklink
- InfoWorks
- Brookdale
- Kraft Technologies
- UBS
- 3-D Technology Group

OREGON

- CBT Nuggets
- Palo Alto Software
- GL Solutions
- Concentric Sky
- XS Media
- City of Eugene
- Five Talent

ARIZONA Q2

- American Express
- TerraVerde
- Salt River Project
- Arizona Public Utilities

LOUISIANA

- BlueCross Blue Shield
- General Informatics
- Eatel
- Trade Security



APPRENTi

The path, the plan, your career in tech.

Thank You

For more information, please contact

jennifer@apprenticareers.org

Or visit

www.ApprentiCareers.org

Join Our Communities



Advancing Women
in Technology
COMMUNITY



Kathleen Martin
Community Manager



Cristina Greysman
Community Chair



Lori Jolley
Community Vice Chair



IT Security
COMMUNITY



Lisa Person
Community Manager



Neal Bradbury
Community Chair



Lysa Myers
Community Vice Chair



Continue the Discussion

- Join us at CCF in Chicago, IL
March 11-13, 2019
- Tuesday, March 12th 3:00 pm (CT)
Hidden Figures: Opening Up
Cybersecurity Careers to Women
- Register at:
<https://www.comptia.org/ccf>



Recommended Resources

- CompTIA.org workforce research reports
<https://www.comptia.org/insight-tools/business?tags=it%20workforce>
- NICE Cybersecurity Workforce Framework
<https://niccs.us-cert.gov/workforce-development/cyber-security-workforce-framework>
- CyberSeek
<https://www.cyberseek.org/>
- Cybersecurity Ventures
<https://cybersecurityventures.com/>
- WTIA
<https://www.washingtontechnology.org/>

THANK YOU FOR YOUR TIME

