



Workforce and Attainment

November 17, 2023

Purpose

- Understand national framework to improve Virginia's workforce competitiveness and educational attainment rates.
- Provide an update on the work of the Virginia Office of Education Economics (VOEE) since it was established in 2021 to support policy decisions.
- Learn how Virginia and national efforts align with goals of the business community from the U.S. Chamber of Commerce.

Meet the Panelists



Stephen Moret

CEO,
Strada Education
Foundation



Heather McKay

Executive Director,
Virginia Office of
Education
Economics (VOEE)



Cheryl Oldham

Vice President of
Education Policy,
U.S. Chamber of
Commerce



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Strengthening Workforce Competitiveness and Pathways to Opportunity in Virginia

*Presentation to Senate Finance and Appropriations Annual Retreat
Stephen Moret, President and CEO*

November 2023



Topics for my remarks today

- 1 The national challenge

- 2 Who is Strada?

- 3 A vision for the future

- 4 Coming attractions

- 5 Where Virginia could go next

The national (and Virginia) challenge: a dynamic labor market that too often isn't working for employers and individuals

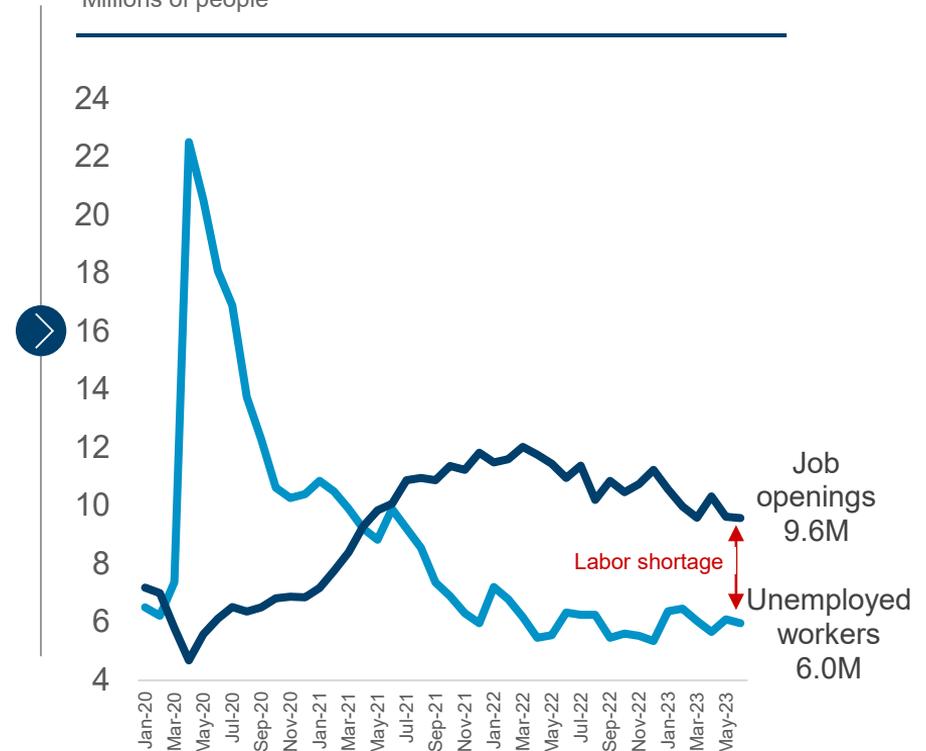
Key labor market challenges:

- **Tech innovation** is driving significant changes in employers' talent needs¹
- **Meeting talent needs** is the top concern of business executives²
- **Worker shortage**: there is a major gap between the number of unemployed workers (6M) and the number of job openings (9.6M)
- **Good jobs shortage**: ~30 million full-time employed adults working in jobs paying less than \$35k
- **Misalignment**: 40% of recent college graduates are underemployed³
- **Chronic undersupply** of talent in high-demand fields (e.g., tech, engineering, nursing, skilled trades, manufacturing technicians)

1. World Economic Forum, *The Future of Jobs Report*, 2023.
2. Area Development, 2021.
3. Federal Reserve Bank of New York, 2023.

Job openings vs. unemployed workers

Millions of people



Source: Bureau of Labor Statistics, 2020-2023.





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Who Is Strada?

Strada is a national foundation that partners with others to strengthen the link between education and opportunity





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How does Strada advance its mission?

- Actionable research
- Grantmaking
- Impact investments
- Technical assistance
- Public policy solutions
- Affiliated nonprofits:

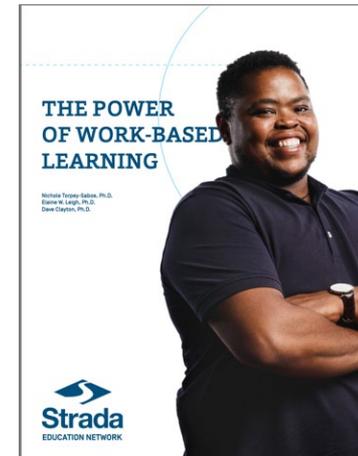
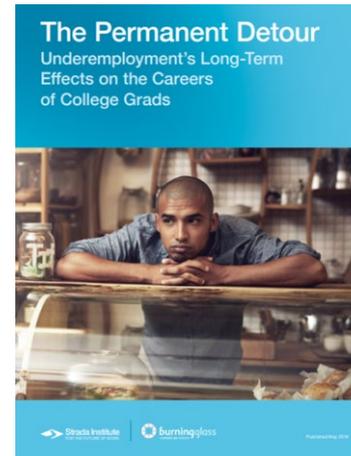
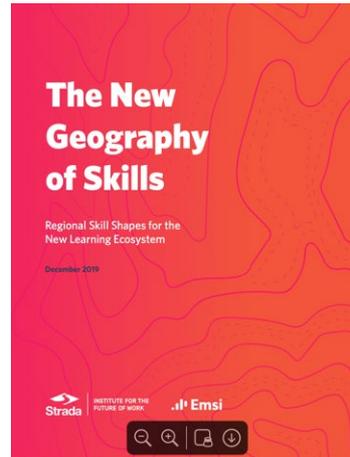


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Examples of Strada's past grants/initiatives related to employers



Strada 2.0



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Our North Star is to collaborate with learners, educators, employers, and policymakers across the U.S. to bring to life a postsecondary education and training ecosystem that provides equitable pathways to opportunity.



Strengthening workforce competitiveness and pathways to opportunity across America (and Virginia): five major strategic pillars

1 Clear outcomes

2 Quality coaching

3 Affordability

4 Work-based learning

5 Employer alignment

Future Vision | Clear Outcomes (i.e., Data Infrastructure)

TODAY

- **Limited transparency** on employment outcomes and return on investment (ROI), especially for nondegree credentials
- **Undeveloped data linkages** across education and employment records, and across state lines
- Key stakeholders **lack access to integrated education and employment data** to guide decisions



FUTURE

- Robust **Education to Employment (E2E) data systems generate actionable insights** on employment outcomes for E2E stakeholders
- **Enhanced UI wage records*** with occupation, job title, and pay rate elevate supply and demand analyses
- Comprehensive, accurate **completion and employment outcomes reporting for non-degree credentials** nationwide

Future Vision | Quality Education-to-Career Coaching

TODAY

- **Lack of access** to help individuals identify and pursue career pathways
- **Education and career guidance are often disconnected** from each other
- Different principles and standards that are **narrow in scope** or **only designed for specific populations or contexts**



FUTURE

- **Universally accessible coaching** that provides individuals with information and support to guide decision-making
- **Integrated education and career guidance** to ensure education decisions are informed by career opportunities
- **Universal, comprehensive principles** for education-to-career coaching that can adapt to different contexts

Future Vision | Affordability

TODAY

- Education/training **programs often are/are** perceived to be **unaffordable relative to their ROI**
- **Lack of federal financial aid for non-degree programs** with good ROI
- **Lack of consistency and clarity** in financial aid award communication



FUTURE

- **Shift in state financial aid policies to focus more on need-based aid***
- Creation of **federal financial aid for short-term programs w/ good ROI** (i.e., Pell grants for non-degree programs)
- **Nationwide adoption of transparency standards**** for university financial aid award communication

* Virginia has made substantial new investments in need-based financial aid in recent years

** Virginia already has adopted the bulk of these transparency standards at its public institutions

Future Vision | Work-Based Learning (WBL)

TODAY

- **Not enough work-based learning experiences**, e.g., most undergraduates do not complete a paid internship
- **WBL is not a priority for most employers** and is situated in niche departments (e.g., CSR, DEI)
- **Trailing apprenticeship participation** in the U.S. compared to leading countries



FUTURE

- **Universal access to paid work-based learning***, including internships, micro-internships, and project-based learning, with state-funded employer incentives
- **Employers embed and sustain WBL** into their core talent recruitment and retention strategies
- Increased federal/state funding for **intermediary programs to expand apprenticeships**

* State policymakers and college/university leaders in Virginia recently have embraced this ambitious goal

Future Vision | Employer Alignment

TODAY

- **Limited access to high-demand, high programs** at many institutions due to state funding models
- Unwarranted **credential inflation at many employers**, limiting access to talent and diversity of talent
- Institution leaders and policymakers with **limited understanding of supply / demand imbalances** by region and occupation



FUTURE

- **Targeted state/federal funding for high-demand, high-wage programs*** to eliminate cost-driven disincentives
- **Adoption of skills-first talent practices** at public and private employers to expand access to talent and opportunity
- **An office of education economics*** in each state to provide consistent, trusted analyses of supply/demand gaps, solutions

* Virginia is one of the national leaders bringing this vision to life (e.g., Tech Talent Investment Program, new Joint Subcommittee), with additional room for improvement

State Opportunity Index: an annual, 50-state assessment of how well each state provides pathways to opportunity after high school



Clear Outcomes: Presence of modern E2E data infrastructure, incl. enhanced wage records and NDC outcomes



Quality Coaching: Percent of college completers who received quality coaching



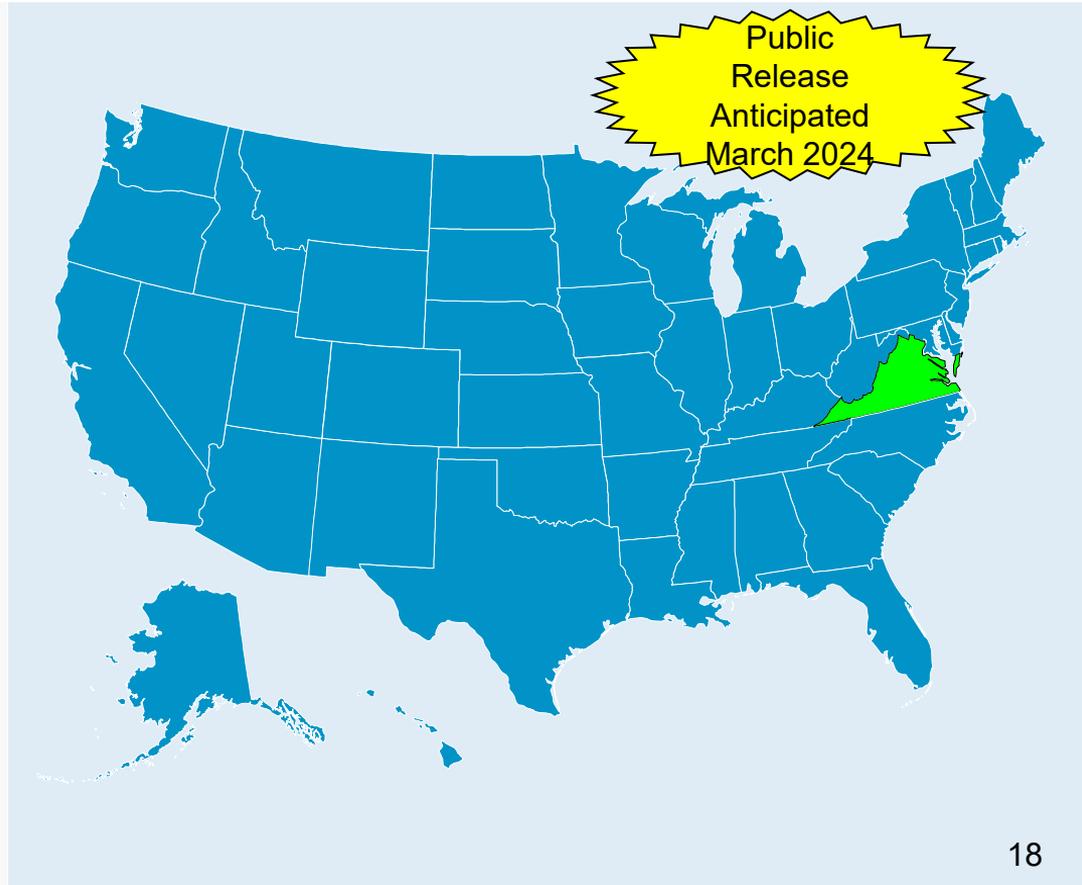
Affordability: Percent of college completers experiencing positive ROI



Work-based Learning: Percent of college completers with a paid internship

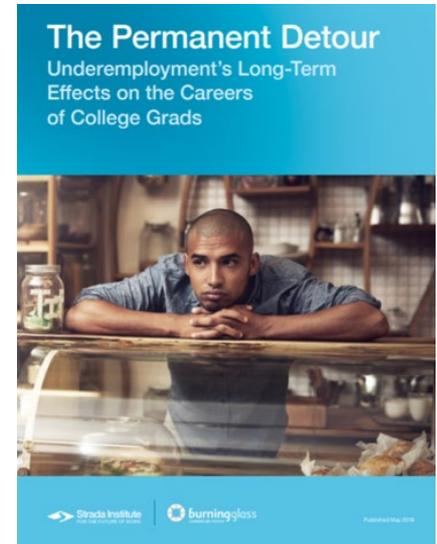


Employer Alignment: Extent to which demand is met for high-wage programs (e.g., computer science, engineering, nursing, skilled trades, manufacturing technicians)



Permanent Detour: Second Edition (coming in Q1 2024)

- Updating Strada's landmark 2018 national analysis of underemployment of college graduates, first developed with Burning Glass Technologies
- New report will be developed with Burning Glass Institute (BGI), an independent 501(c)(3) created by Matt Sigelman, former founder/CEO of Burning Glass
- Several important advancements planned for the second edition
 - Inclusion of race/ethnicity, institution type and selectivity, geography, impact of advanced degrees, participation in work-based learning
 - Strategies for escaping underemployment
 - Assessment of severe versus moderate underemployment
 - Revised analysis of gender differences



New Strada Study in Development: Interstate Migration of Talent

- Strada is planning to develop an insightful report (or series of reports) exploring interstate migration of talent, which is a big contributor (or detractor) from the talent supply of many states
- Some states consistently are donor states to others, while others (e.g., Texas) consistently benefit from inflow of talent inflows from elsewhere (for free)
- Strada is beginning to develop a methodology for this work and expects to execute a pilot version in partnership with higher ed and state leaders in Virginia and beyond
 - Quantitative analysis to show net talent flows and how they vary by age, education, sub-state geography, etc.
 - Survey to understand factors that have the greatest impact on interstate migration decisions (e.g., job opportunities, cost of living, weather, quality of life factors)

Where could Virginia go from here to strengthen workforce competitiveness and pathways to opportunity?



2017-2019

- FastForward (workforce credentials grant program)
- Virginia Talent Accelerator Program (now ranked as best in the U.S.)
- Tech Talent Investment Program (TTIP) to 2x CS graduates
- V-TOP (internships)



2020-2023

- Oversight of childcare and early childhood education to VDOE
- G3 (last-dollar financial aid)
- Virginia Office of Education Economics (VOEE)
- DPOR licensure reciprocity
- Virginia Dept. of Workforce Development and Advancement



2024 AND BEYOND

- Modernized E2E data infrastructure
- Personalized E2E coaching for students (H.S. + college)
- Innovative public/private childcare initiative(s)
- Incentives to expand paid internships, apprenticeships
- TTIP-like program to expand other high-demand, high-wage programs

Learn more at
StradaEducation.org

A photograph of two women sitting at a desk in an office. The woman on the left has curly hair and glasses, wearing a white shirt. The woman on the right has long dark hair and is wearing a striped sleeveless shirt, with her right hand raised. The background shows a window with papers pinned to it. The entire image is overlaid with a semi-transparent blue filter. The word "Questions?" is written in large, white, sans-serif font across the center of the image.

Questions?



Norfolk State University

VIRGINIA OFFICE OF EDUCATION ECONOMICS (VOEE)

SFAC Annual Meeting (11/17/23)

WHAT WE DO

In January 2021, SB1314 created the new office of education and labor market alignment. VOEE is tasked to:

- Coordinate workforce and higher education alignment data analysis and translate data to partners
- Provide a unified, consistent, and impartial source of information or analysis for policy development and implementation related to education, the labor market, and workforce development



VOEE AND TALENT DEVELOPMENT

VOEE examines talent in the Commonwealth:

- K-12
- Higher Education
- Workforce Development
- Apprenticeships

Topics include:

- Degree and non-degree credentials
- Skills
- Talent/skill demand
- Career preparation
- Career navigation
- Career pathways



IMPROVING THE EDUCATION TO EMPLOYMENT ECOSYSTEM



Research and Data:

- Develop data tools
- Conduct research projects
- Partner with experts on research activities



Data Improvements:

- Improve data sets
- Create new and unique Virginia data sets
- Supplement with qualitative data
- Use data from sources outside of the government



Policy and Practice Application:

- Conduct state or regional work for specific projects and activities
- Provide templates and use cases for data and research
- Use research to inform and revise policy efforts
- Examine outcomes



Students Fairfax County

VOEE DASHBOARDS

Education and Workforce Alignment

Job Posting Analytics

Post-Secondary Completion



University of Virginia

EDUCATION AND WORKFORCE ALIGNMENT DASHBOARD

Virginia Education & Workforce Alignment Dashboard

Analysis to support education and workforce decision making across Virginia

[INSTRUCTIONS](#)

- Current Analysis**
Click to Navigate
- Region Profile**
- Workforce**
- Education & Workforce Alignment**
- Demographics**
- Earnings**
- About This Dashboard**

Select Filters

Region Type:

Region:

VOEE Occupational Group:

VOEE Occupational Subgroup:

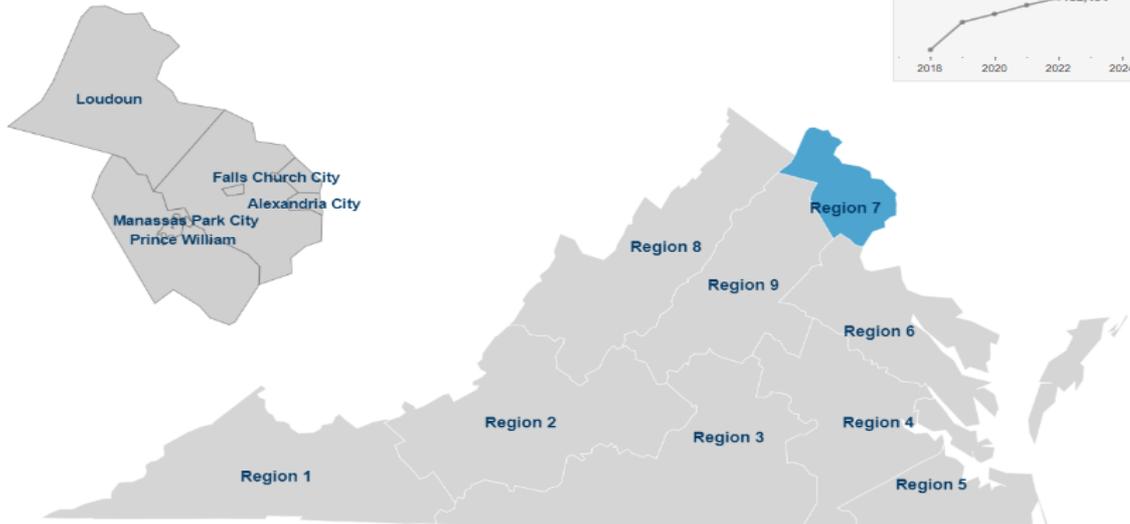
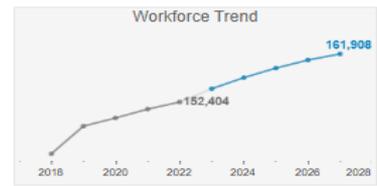
Region Profile

2022 Workforce
152,404

2027 Projection
161,908

Projected Change Next 5 Yrs
+9,504
▲ 6.2%

Projected Avg Annual Openings Next 5 Yrs
13,285





Workforce



Education & Workforce Alignment



Demographics



Earnings



About This Dashboard

5 Year Workforce Projection

2022 Workforce

152,404

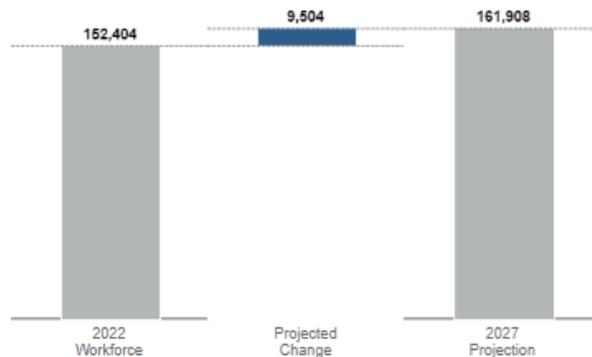
2027 Projection

161,908

Projected Change

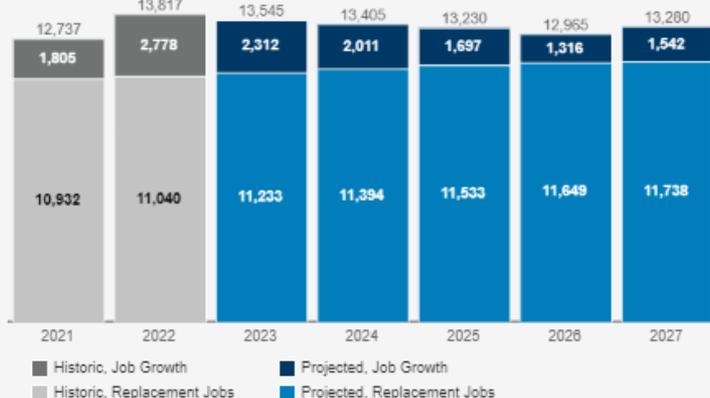
+9,504

▲ 6.2%



Historic & Projected Openings

13,285
Projected Avg Annual Openings Next 5 Yrs



Registered Apprenticeships in Aligned Occupations

RAPIDS 2021 Fiscal Year: 10/1/2020 - 9/30/2021

8

Completions
Fiscal Year

78

Active Registered Apprenticeships
End of Fiscal Year

Post-Secondary Statistics

For more information on education statistics, visit the [Virginia Post-Secondary Completion Dashboard](#)

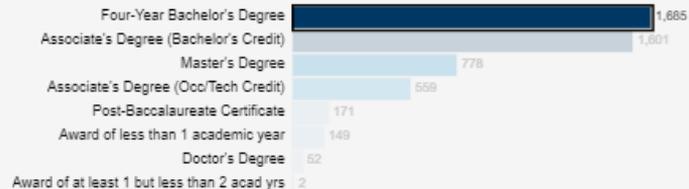
Regional Institutions with Most Degrees Awarded (Academic Year 2021-22)

[Click to Filter Enrollment & Degree Data](#)

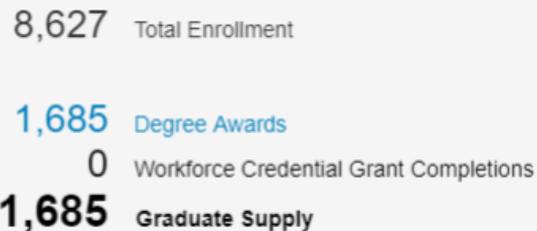


Program Levels of Degrees Awarded (Academic Year 2021-22)

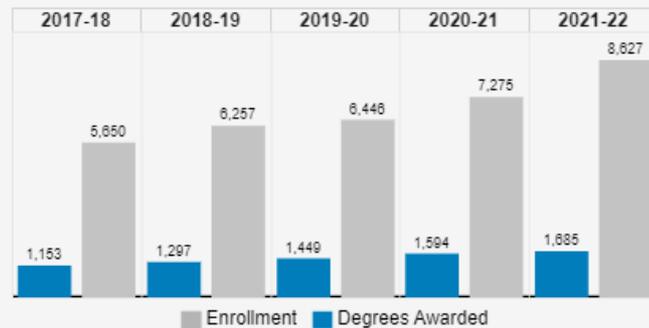
[Click to Filter Enrollment & Degree Data](#)



Academic Year 2021-22 Summary



Degrees & Enrollment Trend



Current Analysis

Click to Navigate



Region Profile



Workforce



Education & Workforce Alignment



Demographics



Earnings



About This Dashboard

Select Filters

Region Type

Go VA Region

Region

Region 7

VOEE Occupational Group

Information Technology

VOEE Occupational Subgroup

(All)

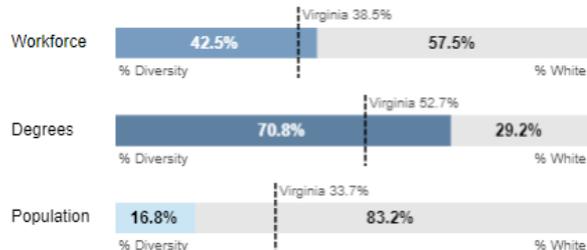


Workforce Demographics & Population Parity

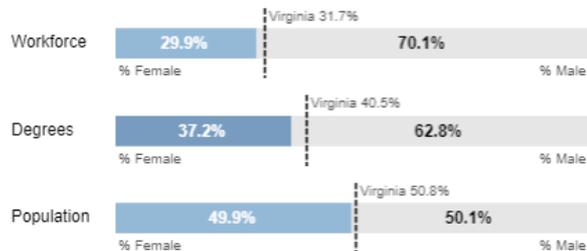
Demographic data for graduates, the aligned workforce, and general population of the selected region.

Racial & Ethnic Diversity

+Hover over bars for diversity breakout



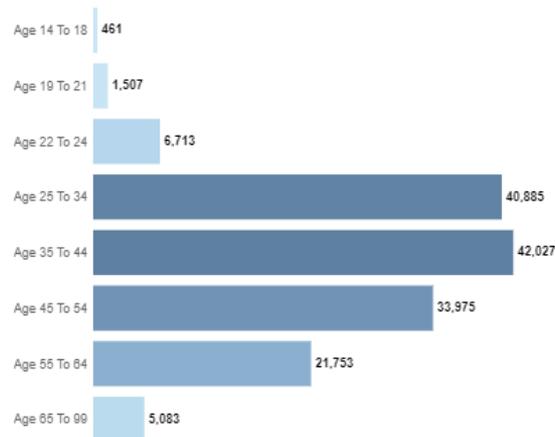
Gender Diversity



Workforce 10 Year Age Out



Workforce Age Distribution



Source: Graduate demographics based on State Council of Higher Education for Virginia (SCHEV). Workforce and population demographic data based on 2020 American Community Survey (ACS) 5-Year Estimates Data Profiles. Education and work experience are based on O*NET.

Current Analysis
Click to Navigate

Region Profile

Workforce

Education & Workforce Alignment

Demographics

Earnings

About This Dashboard

Select Region Type Region
 Filters Go VA Region

VOEE Occupational Group VOEE Occupational Subgroup
 Information Technology (All)



Earnings of Graduates & Workforce

Aligned Degree Program Graduate Earnings*

- * 1 yr - one year post graduation
- * 3 yr - three years post graduation
- * 5 yr - three years post graduation

Incumbent Workforce Earnings Percentiles

- * 10th %ile - tenth percentile earnings in the most recent year
- * Median - median percentile earnings in the most recent year
- * 90th %ile - ninetieth percentile earnings in the most recent year

Self-sufficiency Standards - are based on the following Family Types:

- (1) * 1 Adult, no children
- (2) * 1 Adult, 1 preschooler
- (3) * 2 Adults, 1 Infant, 1 Preschooler

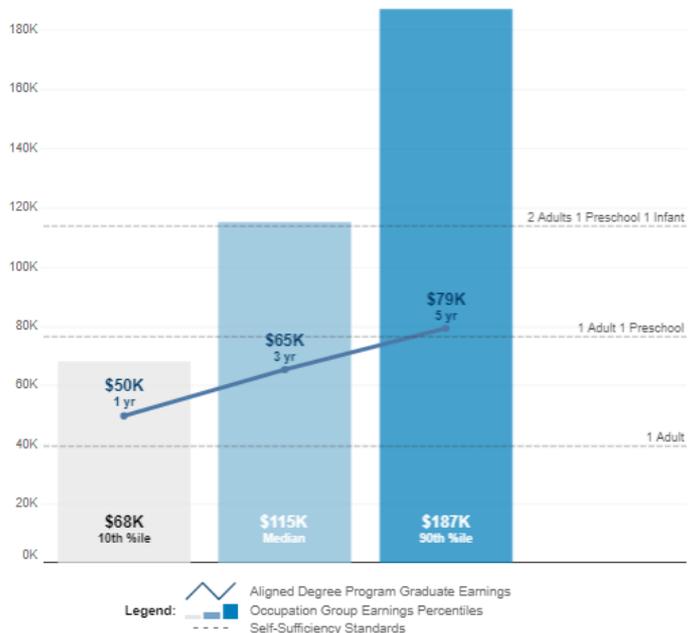
The Self-Sufficiency Standard for Virginia 2021, Center for Women's Welfare, University of Washington.

For more information visit - <https://selfsufficiencystandard.org/washington/>

> **Select Locality for Self Sufficiency Standards**

*"ALL" for selected region average.

	(1)	(2)	(3)
ALL (Average)	39,385	76,425	113,668
Alexandria City	40,537	79,125	117,686
Arlington	43,996	91,496	136,856
Fairfax	42,714	81,199	120,344
Fairfax City	40,278	78,470	114,166
Falls Church City	38,824	76,892	116,006
Loudoun	36,915	76,528	113,599
Manassas City	33,468	62,799	93,724
Manassas Park City	35,708	71,099	108,509
Prince William	36,005	70,213	102,126



*Not all graduates work in aligned occupations. VOEE is working to further refine this data. This data is intended to be used as an estimate and is not predictive.
 Source: Graduate earnings data provided by State Council of Higher Education for Virginia (SCHEV). Incumbent workforce earnings derived from Occupational Employment and Wage Statistics (OEWS) and Quarterly Census of Employment and Wages (QCEW) data sourced through Lightcast.



JOB POSTING ANALYTICS DASHBOARD

Virginia Job Posting Analytics Explorer

Job posting analytics based on the previous 12-months of online job postings associated with selected occupation. Categories are ranked in descending order by number of postings.



Select Filters

Region Type: Go VA Region | Region: Region 7 | VOOE Occupational Group: Information Technology | VOOE Occupational Subgroup: (All)

Minimum Advertised Education Level: All | Include Internships?: All Job Postings | Include Staffing Companies?: All Job Postings

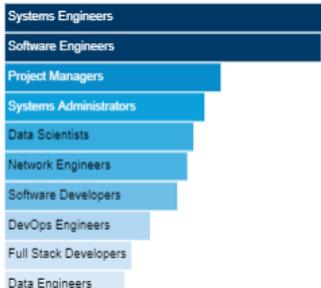
Top Industries



Top Companies



Top Job Titles



Posting Intensity



Median Duration (days)



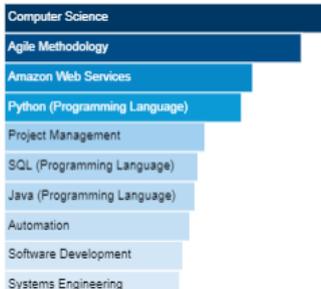
Top Certifications



Top Common Skills



Top Specialized Skills



Top Software Skills



Source: Job posting data for a selected region is sourced from Lightcast and updated monthly on a rolling 12-month basis. For more details on the Lightcast job postings analytics visit [Lightcast Job Posting Analytics Methodology](#).





College of William and Mary

POST-SECONDARY COMPLETION DASHBOARD

← GO BACK

Current Analysis
Click to Navigate



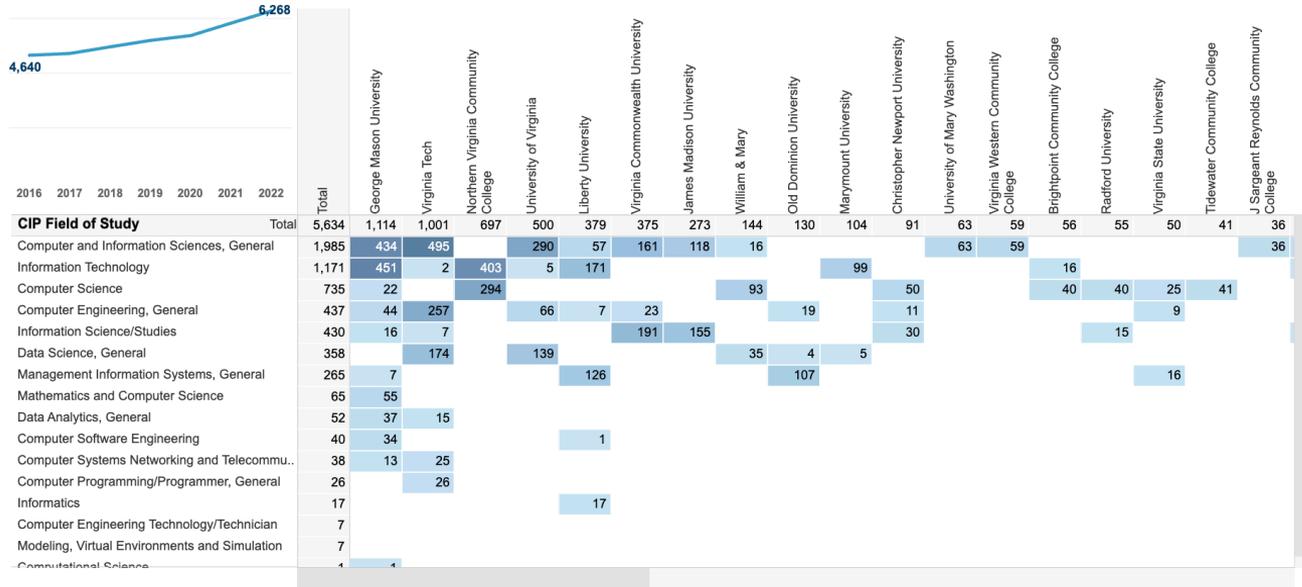
Institutions

Select Filters: Region Type: Go VA Region, Region: (All), Occupation Taxonomy: Career Clusters, Occupation Category: Information Technology, Occupation Subcategory: Programming and Software Dev...



Total Degrees by Institutions & Programs [Select Additional Filters Below](#)

Degree & Headcount Measure: Total Degrees, Institution Name: (All), Report Year: 2022, Program Level Name: (All), Gender: (All), Ethnicity: (All)



Source: Academic degree, enrollment, and Workforce Credential Grant program completion data provided by SCHEV.



Bailey's School of Arts and Sciences

VIRGINIA SKILLS INITIATIVE

UNDERSTANDING THE CURRENCY OF SKILLS: VIRGINIA SKILLS INITIATIVE

With dollars through the Workforce Investment and Opportunity Act and in partnership with SCHEV and VCCS, VOEE will develop two new data sets on skills for Virginia:

Alumni Tracking:

- Track 15 years of graduates and non-completers from Virginia higher education institutions through professional social media profiles to collect data on:
 - Occupation/s
 - Locations
 - Skills
 - Non-degree credentials

Educational Programming:

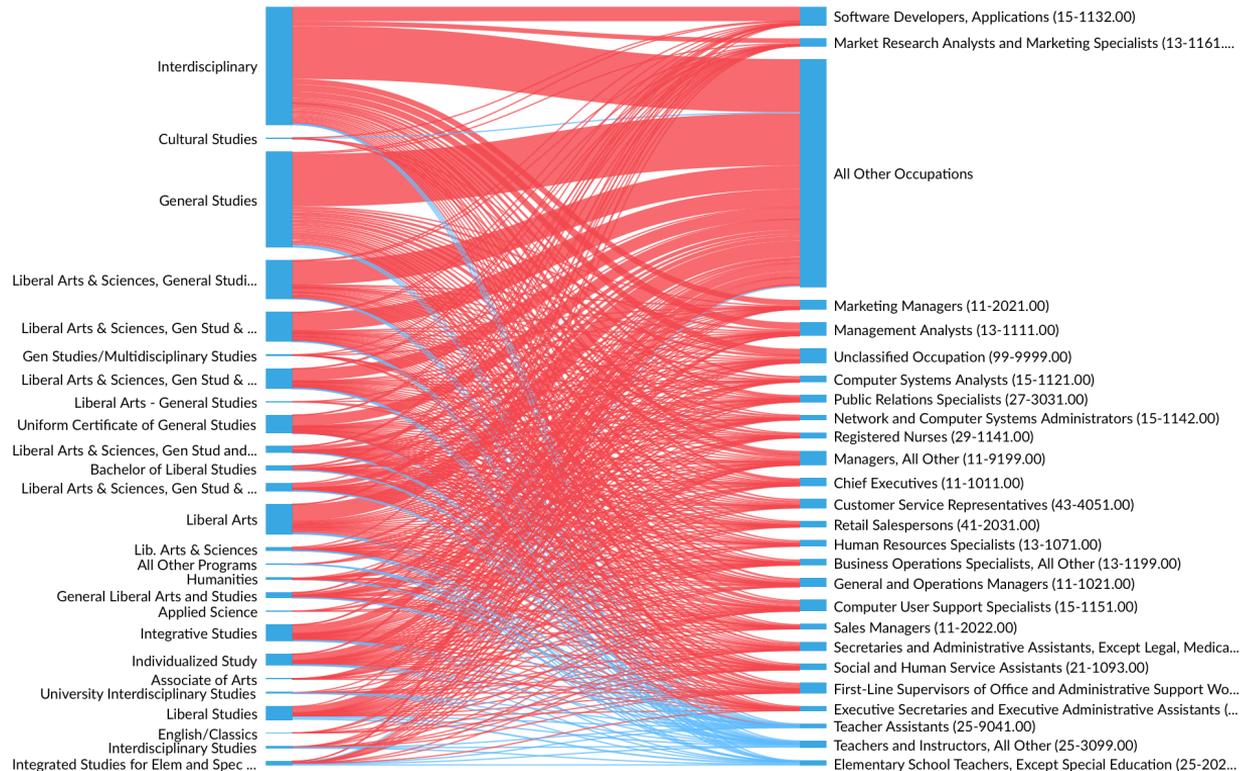
- Work with institutions to develop a Virginia-specific data set on skills and competencies taught in credit and non-credit programs throughout Virginia.



Virginia Highlands Community College

NON-LINEARITY OF LIBERAL ARTS IN VIRGINIA

Liberal Arts and Sciences, General Studies and Humanities



Source: VOEE Virginia Skills Project; n= 13,779

Questions? Ideas for collaboration? Get in touch

Heather A. McKay
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www.voee.org
www.voee.org/data





U.S. Chamber of Commerce



Cheryl Oldham

Vice President of
Education Policy,
U.S. Chamber of
Commerce

- Role of U.S. Chamber
- Chamber Goals Related to Workforce and Educational Attainment
- Strengths and Areas of Opportunity for Virginia

Key Takeaways

- National work is underway to strengthen workforce competitiveness and improve education attainment through five pillars identified by Strada.
- Virginia has access to new data and insights through VOEE that can assist policy decisions and support greater education and workforce alignment.
- Virginia is in a position of strength related to the five pillars but should consider additional opportunities related to:
 - Education to employment (E2E) data infrastructure;
 - Personalized coaching for students (high school and college);
 - Incentives for paid internships/apprenticeships; and
 - Programs that expand in high-demand, high-wage areas.