

Utah's Engineering and Computer Science Workforce

Higher Education and Economic Trends in Utah

October 11, 2022

INFORMED DECISIONS™

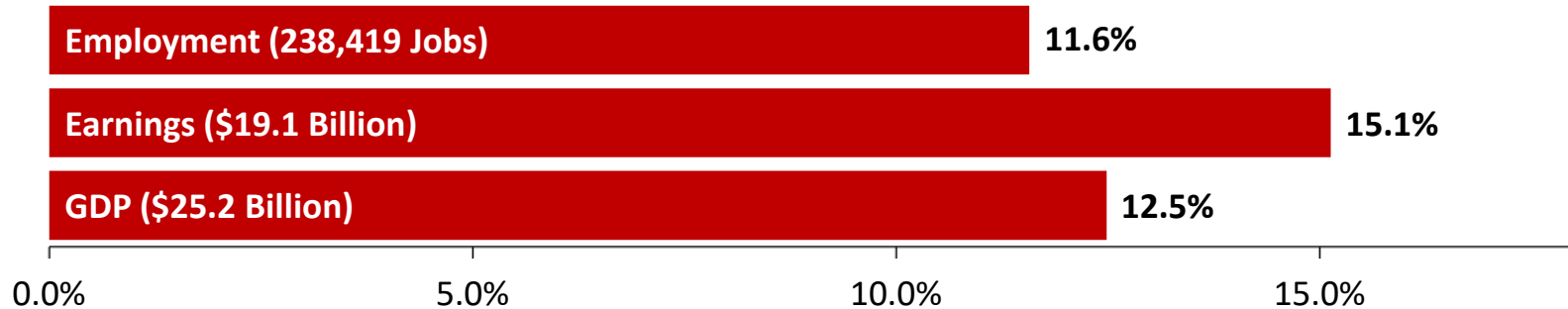
Key Findings

- **Economic Contributions** – Over 238,000 jobs and \$25B in GDP per year from Utah workers in engineering and CS occupations
- **Higher Education** – Engineering and computer science degree completions doubled since 2000 with significant state funding
- **Utah Employment Trends** – Expanding role of engineering and CS workers as part of Utah’s increasingly diverse workforce
- **Utah Employment Patterns** – Above-average pay in engineering and computer science jobs in key Utah industries

Utah Economic Contributions, 2020

(Engineering and Computer Science Workforce Contributions as a Share of Statewide Totals from All Sectors)

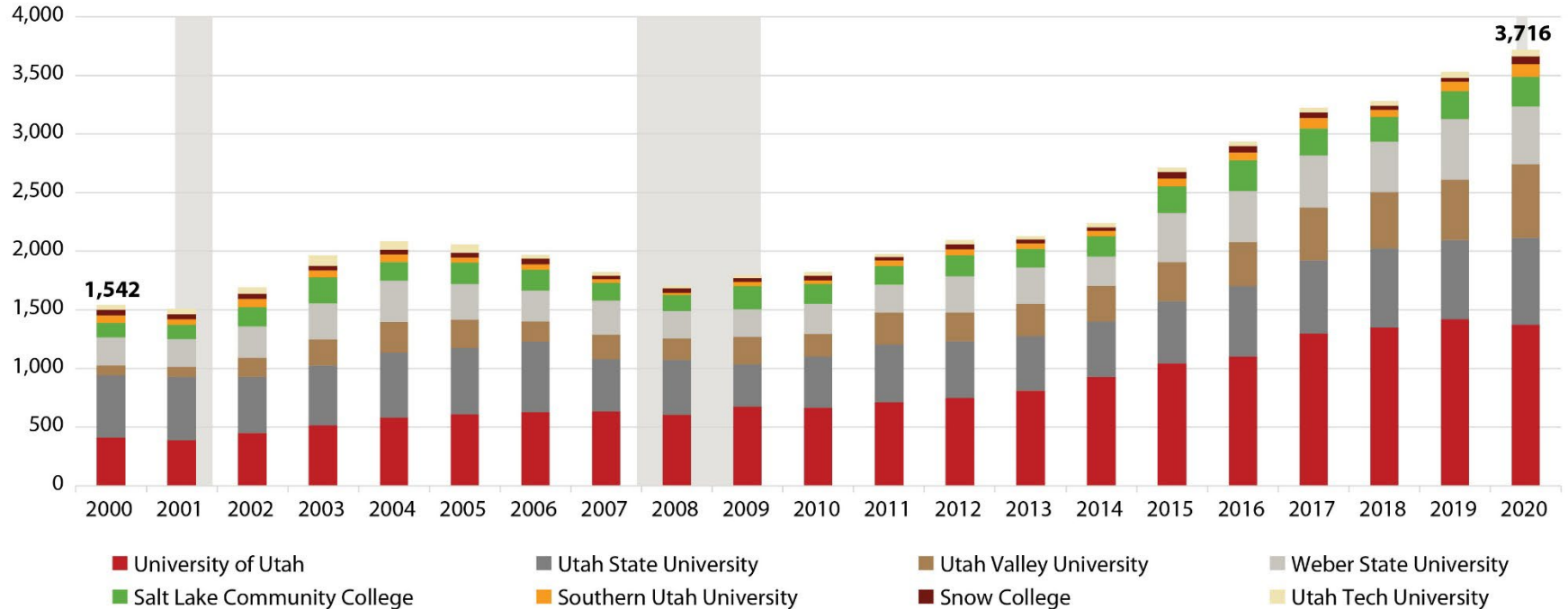
Engineering and computer science workers help sustain **12% to 15% of Utah's economy.**



Note: Economic contributions include direct, indirect, and induced effects of worker productivity and spending from their engineering and computer science jobs.
Source: Kem C. Gardner Policy Institute analysis of data from the Utah Department of Workforce Services and U.S. Bureau of Economic Analysis data using the REMI PI+ model

USHE Degree Completions in Engineering and CS, 2000–2020

Engineering and computer science degree completions **more than doubled** in 20 years.

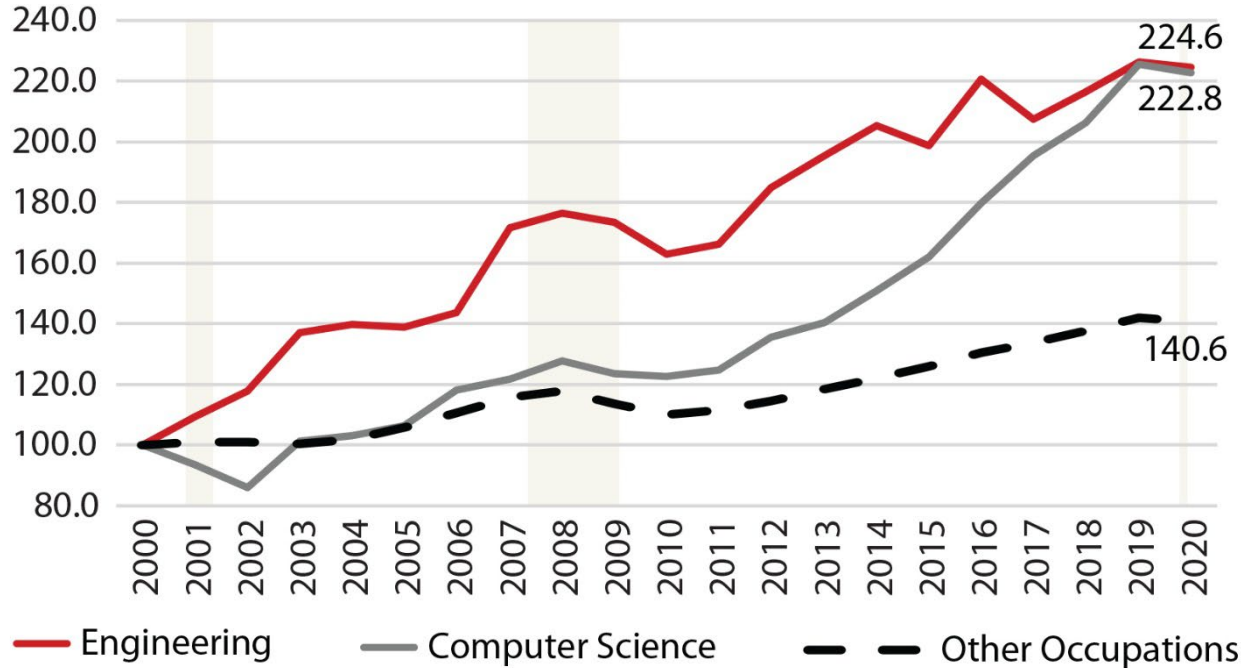


Note: Completions include associate, bachelor's, and graduate degrees awarded in the Utah System of Higher Education (USHE) in years ending June 30. Shaded areas indicate a U.S. recession during more than one month of the year.

Source: Kem C. Gardner Policy Institute analysis of data from the National Center for Education Statistics, Integrated Postsecondary Education Data System

Utah Employment Index, 2000–2020

(100 = Number of Jobs in 2000)



With robust labor supply and demand, employment growth in engineering and computer science jobs was **more than triple** the average for other occupations.

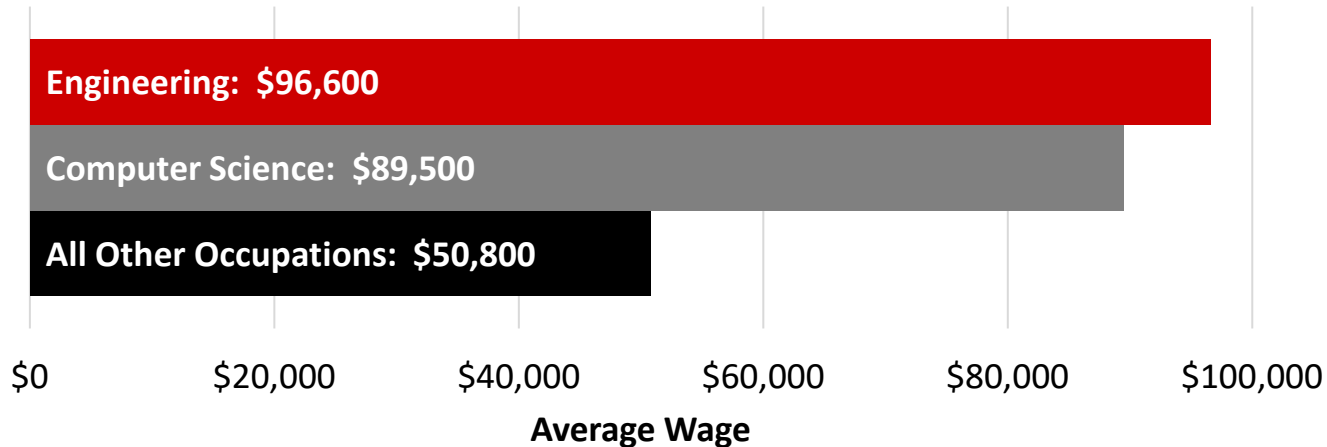
Note: Indices track growth paths for employee jobs in May of each year, beginning in 2000 with 9,420 engineering jobs, 28,370 computer science jobs, and 999,110 jobs in other occupations. Shaded areas indicate a U.S. recession.

Source: Kem C. Gardner Policy Institute analysis of sample data from the U.S. Bureau of Labor Statistics, Occupational Employment and Wage Statistics

Engineering and Computer Sciences Pay in Utah, 2020

(Average Employee Wage)

Engineering jobs pay **98% more** and CS jobs pay **76% more** than other occupations.

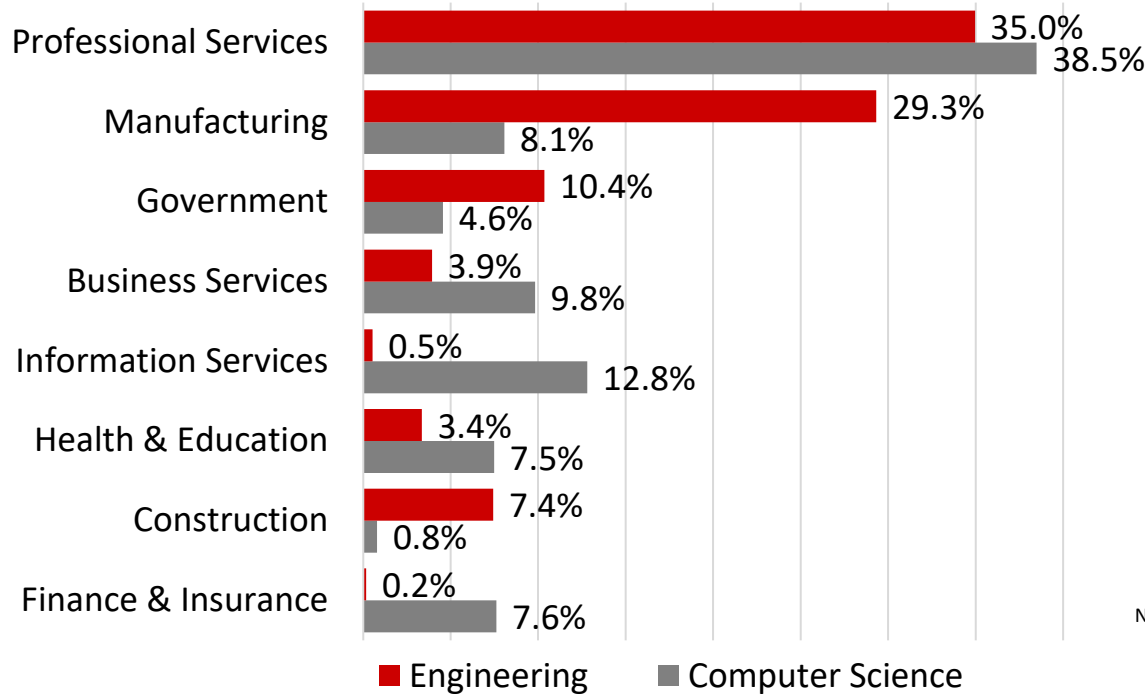


Note: Employee wages do not include employer-paid benefits or income from self employment.

Source: Kem C. Gardner Policy Institute analysis of data from the Utah Department of Workforce Services (Staffing Patterns Dataset and Utah Economic Data Viewer)

Industry Profile: Where are Eng. and CS workers needed?

(Share of Utah Engineering or Computer Science Employment in 2020; Showing Sectors With at Least 5.0%)



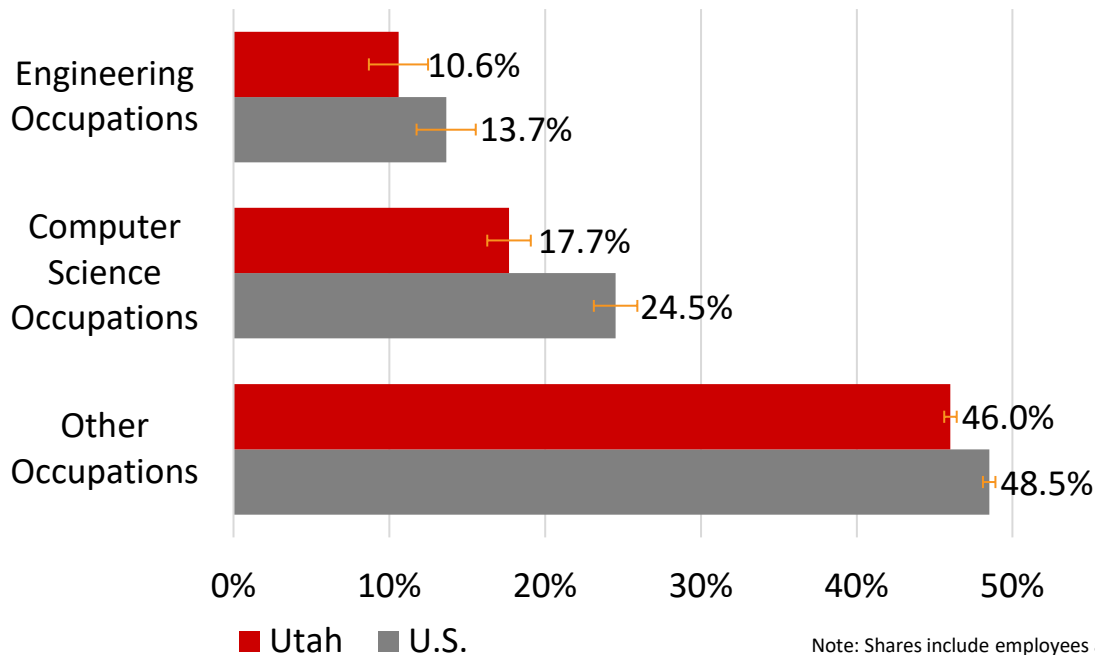
Key sectors of Utah's economy rely on engineering and computer science workers.

Note: Total employment was 25,863 engineering jobs and 84,090 computer science jobs for employees and self-employed workers. Sectors not shown are wholesale trade, real estate, retail trade, transportation and utilities, natural resources, other services, and leisure and hospitality with a combined 9.9% of engineering-related jobs and 10.4% of computer science-related jobs.

Source: Kem C. Gardner Policy Institute analysis of data from the Utah Department of Workforce Services

Women in Utah's Engineering and CS Workforce, 2015–2019

(Share of Adult Workers in Occupation Category)



Historically, in Utah and the U.S., women have been **underrepresented** in engineering and computer science roles.

Note: Shares include employees and self-employed workers. Orange lines at the end of bars mark 90% confidence intervals around percentage estimates from sample data. Where orange-bar spans for two time periods or occupation groups do not overlap, we can say those values are different with 90% degree of confidence.

Source: Kem C. Gardner Policy Institute analysis of data from the U.S. Census Bureau, 5-Year American Community Survey, Integrated Public Use Microdata Series

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