



# OVERVIEW

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## U.S. Workforce through 2020

**All Occupations 164 million**

**All STEM Jobs 9.2 million**

**Computing Jobs**

**4.6 million**



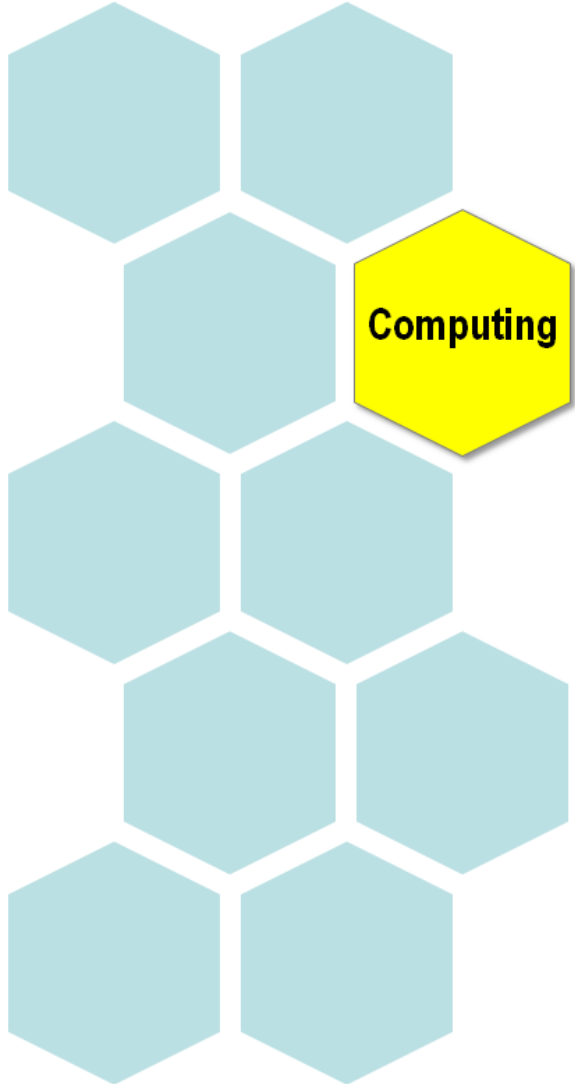
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Source: Jobs data and mean annual wages are from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp>

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# Quick Facts about Computing Jobs Through 2020



Computing and mathematics is one of the **TOP 10 fastest growing** major occupational groups 2010-2020.

**150,000+** job openings in computing annually.

**1 in every 2** STEM jobs will be in computing in 2020.

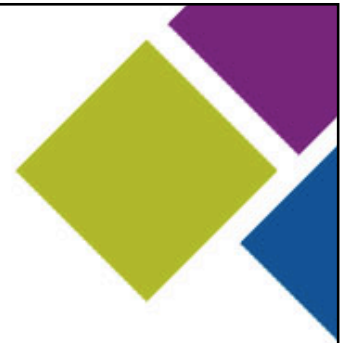


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Sources: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>. Educational levels are calculated from BLS Occupational Projections Data, Employment 2010-2020, available at <http://data.bls.gov/oep/> and the BLS Occupational Outlook Handbook 2010-2020, available at <http://bls.gov/ooh/>.

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# THE BRIGHT FUTURE FOR COMPUTING JOBS

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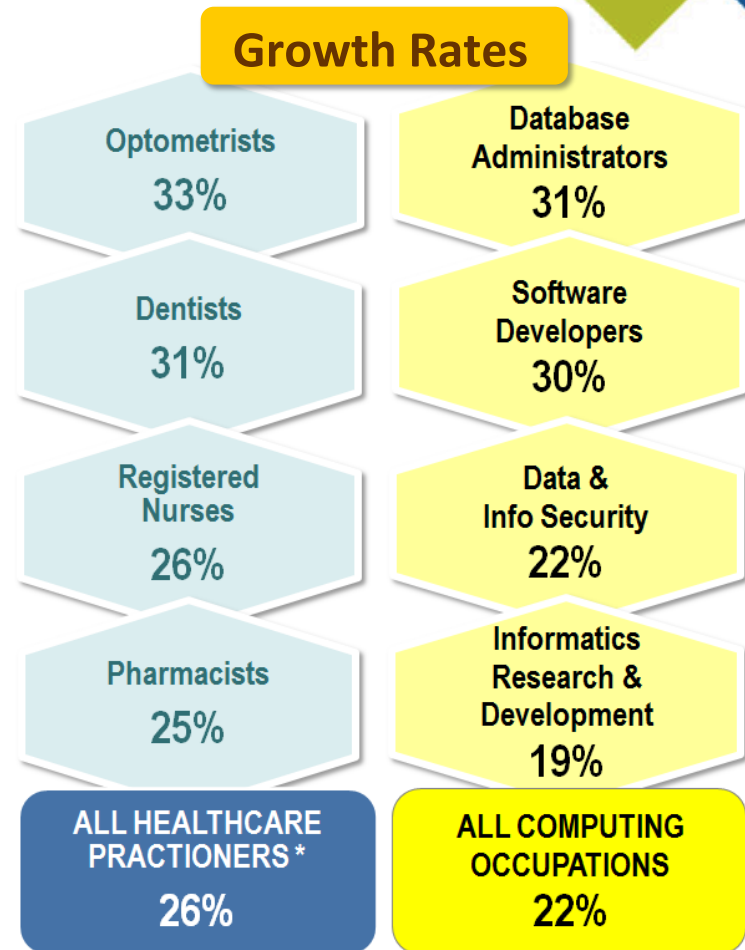
# U.S. Employment through 2020

## How Computing Stacks Up To Healthcare

**22%** job growth rate  
in computing jobs, as **comparable to**  
healthcare job growth rates 2010-2020.

**51,000** projected shortfall  
in qualified health IT workers 2011-2015.

**90%** of physicians  
to use **electronic health records** by 2019 as  
a result of the federal HITECH Act of 2009.



\* Healthcare practitioners and technicians



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Sources: Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>. U.S. Department of Health and Human Services (HHS), HITECH Programs, <http://www.healthit.gov>. Congressional Budget Office, Analysis of HITECH Act of 2009.

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# Total Employment in STEM in 2020

Science, Technology, Engineering, and Mathematics



<b>STEM</b>	<b>9.2 million</b>
Architecture/Engineering	2.8 million
Computing	4.6 million
Mathematics	0.1 million
Life Sciences	0.6 million
Physical Sciences	0.4 million
Social Sciences	0.6 million

\* Subtotals do not equal 9.2 million due to rounding.



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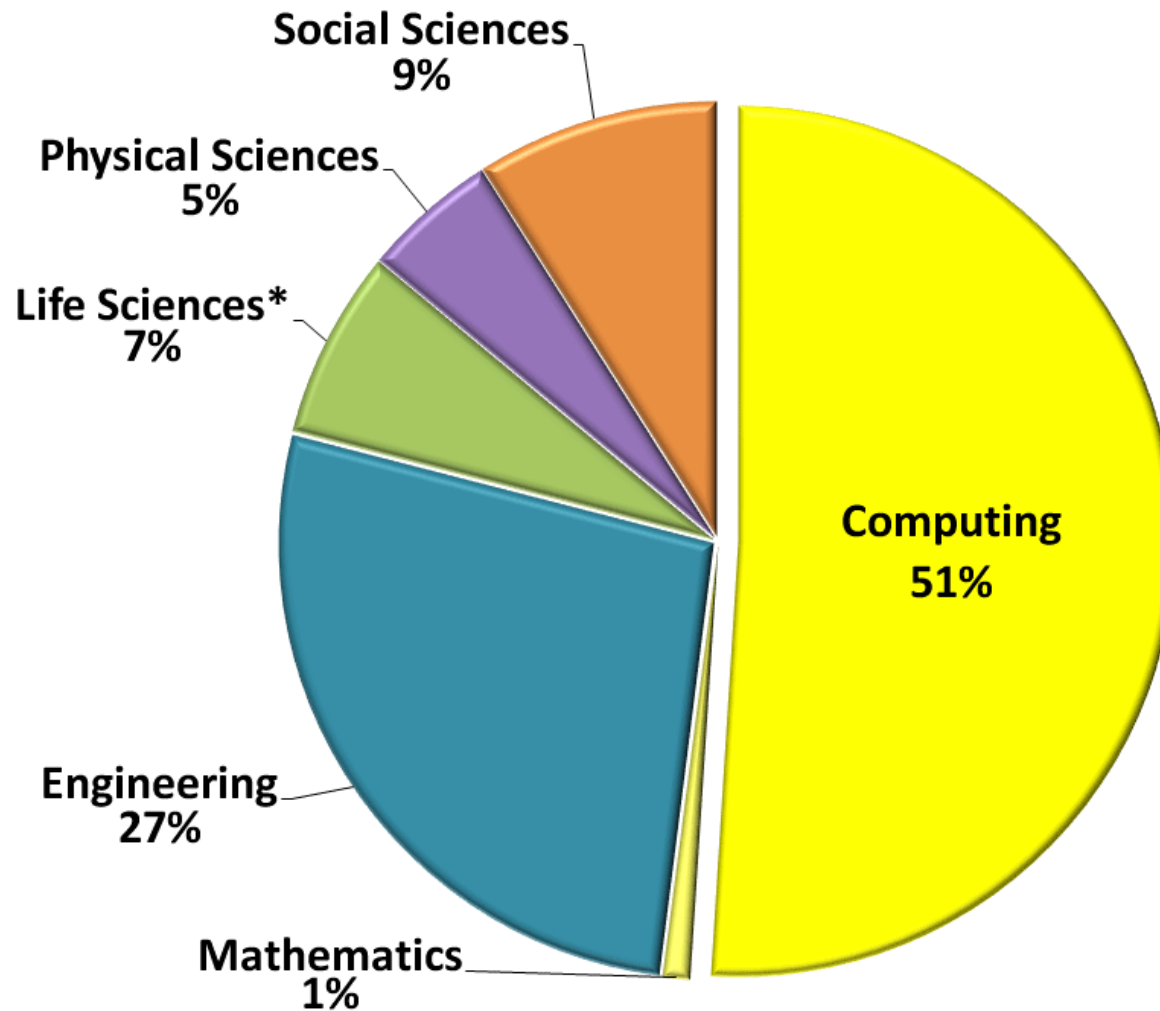
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Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>. STEM is defined here to include non-medical occupations.

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# Where the STEM Jobs Will Be

Projected Annual Growth of Total STEM Job Openings 2010-2020



\* STEM is defined here to include non-medical occupations.

Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>.



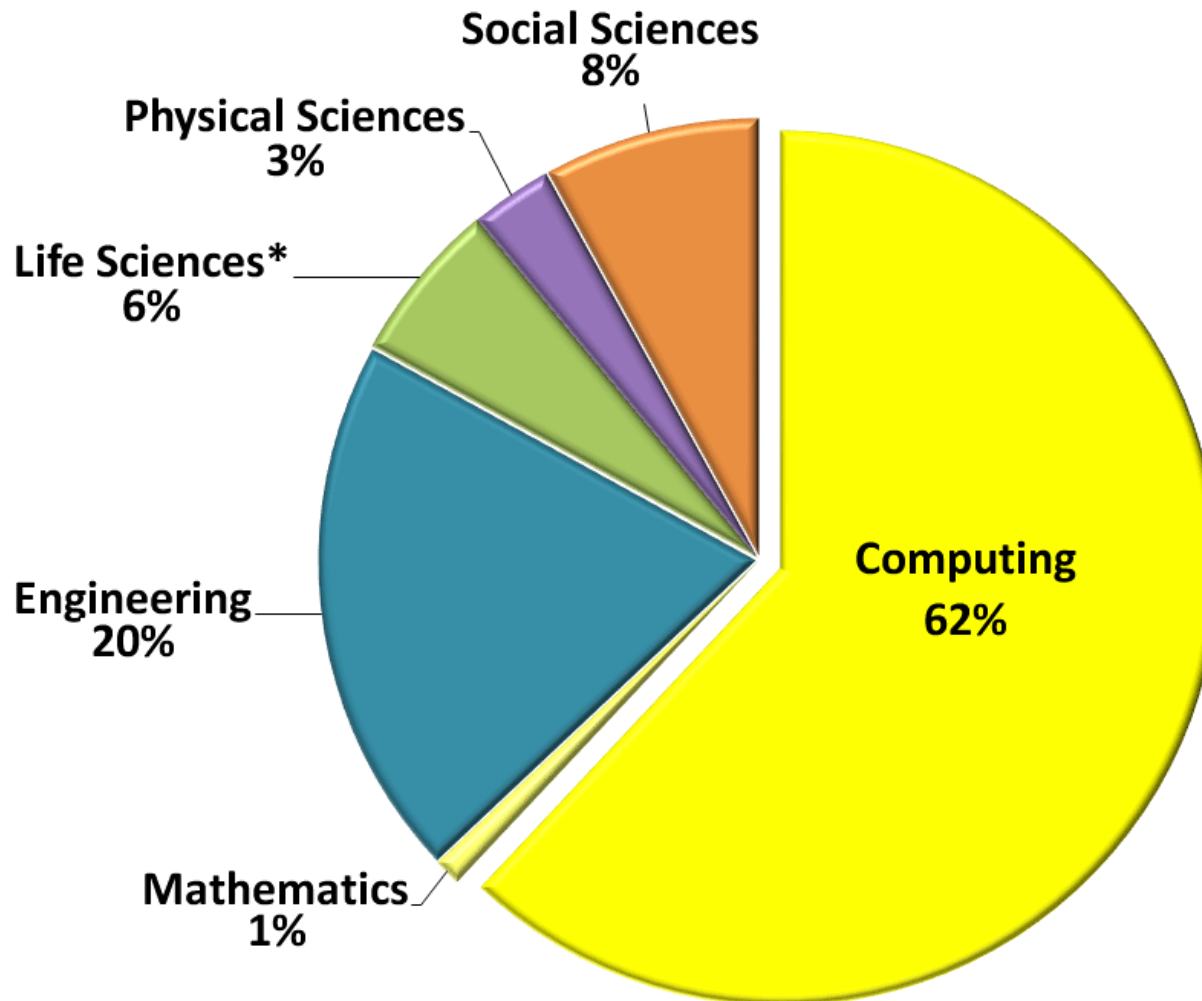
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# Where the STEM Jobs Will Be

Projected Annual Growth of **NEWLY CREATED** STEM Job Openings 2010-2020



\* STEM is defined here to include non-medical occupations.

Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>.



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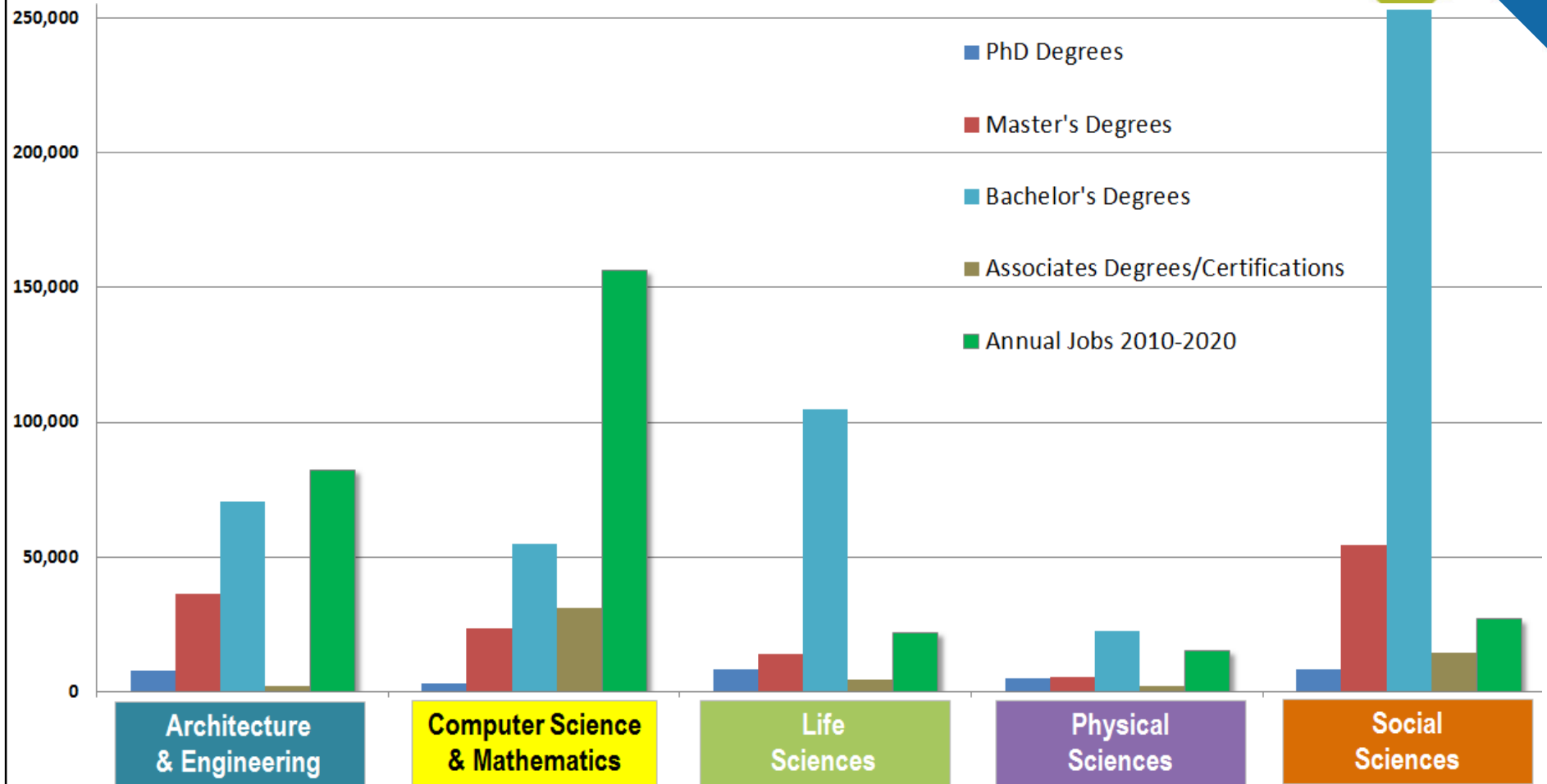
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# Where the STEM Jobs Will Be

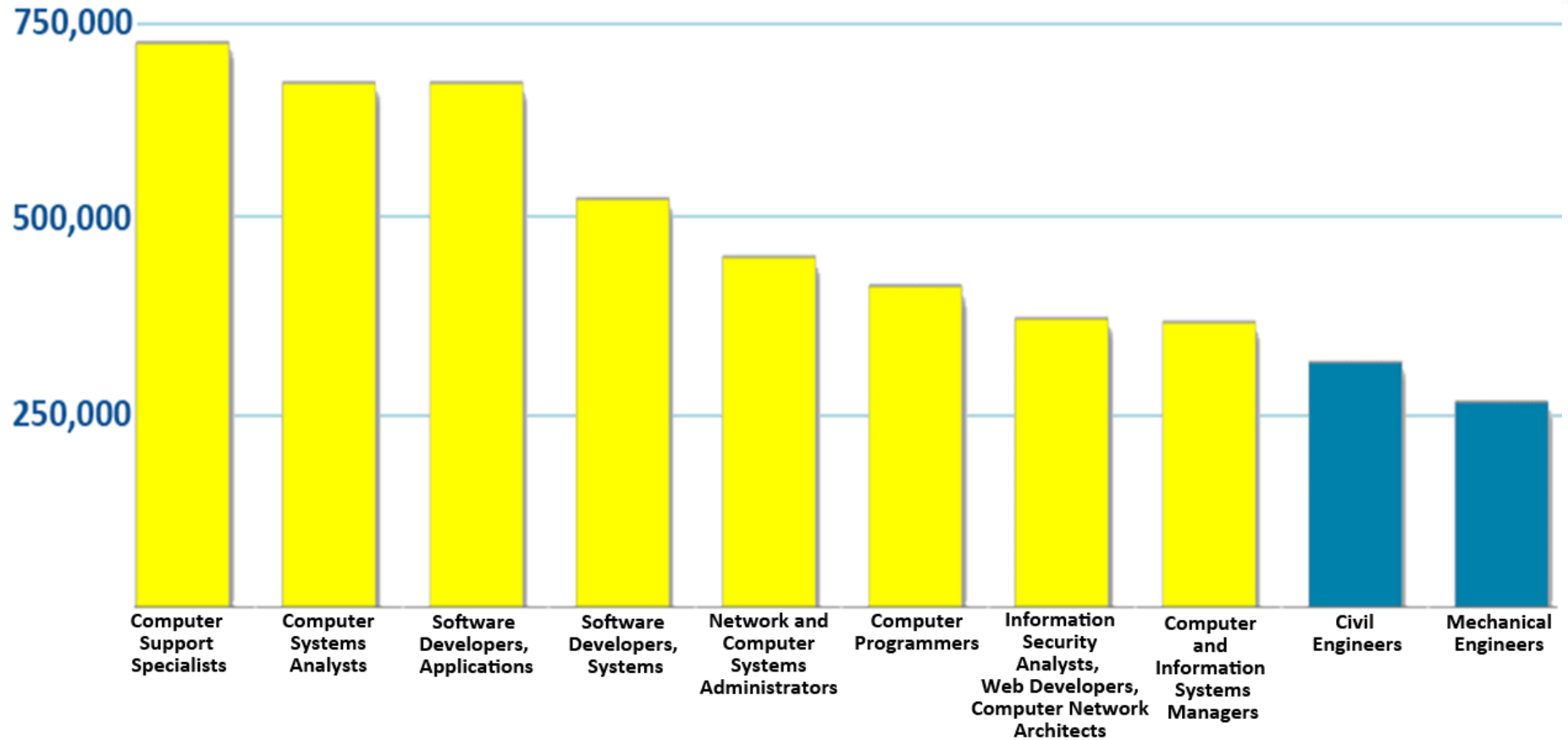
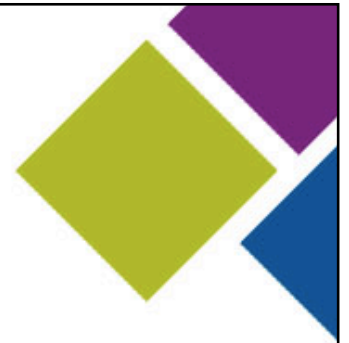
## Degrees vs. Jobs Annually



Sources: Degree data are calculated from the National Science Foundation (NSF), Science and Engineering Indicators 2012, available at <http://www.nsf.gov/statistics/seind12/appendix.htm>. Annual jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>. STEM is defined here to include non-medical degrees and occupations.

# Where the STEM Jobs Will Be

## Top 10 STEM Occupations by Total Employment in 2020



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Source: Jobs data are calculated from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>. STEM is defined here to include non-medical occupations.

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# EARNINGS POTENTIAL IN COMPUTING

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# Where the U.S. Jobs Will Be

## Top 10 Major Occupational Groups 2010-2020 and Average Salaries in May 2011

	Major Occupational Group	% Growth 2010-2020	2011 Average Annual Salary
1	Healthcare Support Occupations	35%	\$27,370
2	Personal Care and Service Occupations	27%	\$24,620
3	Healthcare Practitioners and Technical Occupations	26%	\$72,730
4	Community and Social Service Occupations	24%	\$43,830
5	Construction and Extraction Occupations	22%	\$44,630
<b>6</b>	<b>Computing and Mathematical Occupations</b>	<b>22%</b>	<b>\$78,730</b>
7	Business and Financial Operations Occupations	17%	\$68,740
<b>8</b>	<b>Life, Physical, and Social Science Occupations</b>	<b>16%</b>	<b>\$67,470</b>
9	Education, Training, and Library Occupations	15%	\$50,870
10	Transportation and Material Moving Occupations	15%	\$33,200

Sources: Jobs data are from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>.  
Salary data are from BLS Occupational Employment Statistics, May 2011, available at [http://www.bls.gov/oes/current/oes\\_nat.htm](http://www.bls.gov/oes/current/oes_nat.htm).

# Where the STEM Jobs Will Be

## Projected Growth of Selected STEM Jobs 2010-2020



STEM Job	2010 Total Employment	% Growth 2010-2020	2011 Average Annual Salary
Engineering and Architectural Managers	176,800	9%	\$129,350
<b>Computer and Information Systems Managers</b>	<b>307,900</b>	<b>18%</b>	<b>\$125,660</b>
Aerospace Engineers	81,000	5%	\$103,870
<b>Software Developers, Systems and Applications</b>	<b>913,100</b>	<b>30%</b>	<b>\$96,250</b>
Biochemists and Biophysicists	25,100	31%	\$87,640
Civil Engineers	262,800	19%	\$82,710
<b>Database Administrators</b>	<b>110,800</b>	<b>31%</b>	<b>\$77,350</b>
Environmental Scientists	89,400	19%	\$68,810
Chemists	82,200	4%	\$74,780
Anthropologists and Archeologists	6,100	21%	\$59,040

Sources: Jobs data are from the Bureau of Labor Statistics (BLS), Employment Projections 2010-2020, available at <http://www.bls.gov/emp/>. Salary data are from BLS Occupational Employment Statistics, May 2011, available at [http://www.bls.gov/oes/current/oes\\_nat.htm](http://www.bls.gov/oes/current/oes_nat.htm). STEM is defined here to include non-medical occupations.