COMPUTER SCIENCE IN WYOMING

BEYOND PROGRAMMING, REACHING EVERY INDUSTRY

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What is Computer Science?

FROM K12 COMPUTER SCIENCE (K12CS.ORG)

As the foundation for all computing, computer science is defined as "the study of computers and algorithmic processes, including their principles, their hardware and software designs, their [implementation], and their impact on society."

- K-12 COMPUTER SCIENCE FRAMEWORK

Unfortunately, computer science is often confused with the everyday use of computers and computer applications, such as learning how to access the Internet and use digital presentation software.

Computer science builds on computer literacy, educational technology, digital citizenship, and information technology. Their differences and relationship with computer science are described here.

COMPUTER LITERACY

Computer literacy refers to the general use of computers and programs (i.e., computer applications) such as productivity software, performing an Internet search and creating a digital presentation.

EDUCATIONAL TECHNOLOGY

Educational technology applies computer literacy to school subjects. For example, students in an English

(Continued on next page)

Wyoming EXCELS

WYOMING DEPARTMENT OF EDUCATION

CONTINUED FROM What is Computer Science?

class can use a web-based application to collaboratively create, edit, and store an essay online.

DIGITAL CITIZENSHIP

Digital citizenship refers to the appropriate and responsible use of technology, such as choosing an appropriate password and keeping it secure.

INFORMATION TECHNOLOGY

While often overlapping with computer science, information technology is mainly focused on industrial applications of computer science, such as installing and operating software rather than creating it. Information technology professionals often have a background in computer science.

COMPUTER SCIENCE

These aspects of computing are distinguished from computer science because they are focused on using computer technologies rather than understanding why they work and how to create those technologies. Knowing why and how computers work (i.e., computer science), provides the basis for a deep understanding of computer use and the relevant rights, responsibilities, and applications.

3 Benefits of Computer Science

FROM K12 COMPUTER SCIENCE & CODING FOR KIDS: THE BENEFITS OF STARTING COMPUTER SCIENCE EDUCATION YOUNG BY EMILY HAYDEN (WWW.RASMUSSEN.EDU/DEGREES/TECHNOLOGY/BLOG/CODING-FOR-KIDS/)

COMPUTATIONAL THINKING

Computational thinking is essentially a problem-solving process that involves designing solutions that capitalize on the power of computers; this process begins before a single line of code is written. Computers provide benefits in terms of memory, speed, and accuracy of execution. Computers also require people to express their thinking in a formal structure, such as a programming language. Similar to writing notes on a piece of paper to "get your thoughts down," creating a program allows people to externalize their thoughts in a form that can be manipulated and scrutinized. Programming allows students to think about their thinking; by debugging a program, students debug their own thinking (Papert, 1980).

SEQUENTIAL THINKING

The chronological sequencing of events and actions - relates directly to the ability to order events in text, contributing to improved reading comprehension.

CURIOSITY

A major driver of creativity and encouraging students to figure out how things work.

"COMPUTER SCIENCE EDUCATION ENHANCES OUR CHILDREN'S ABILITY TO THINK, ENGAGES THEM WITH HANDS-ON TEAMWORK AND PREPARES THEM FOR A SUCCESSFUL FUTURE."

- CODING FOR KIDS

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AP Computer Science

FROM CODE.ORG

Wyoming is ranked LAST in the nation for numbers of students taking and passing the AP Computer Science Exam.

21 exams were taken in AP Computer Science by high school students in Wyoming in 2017. Of those, only 24% (5 students) were female

0 were taken by Hispanic or Latino students, Black students, Native American, Alaska Native, Native Hawaiian, or Pacific Islander students

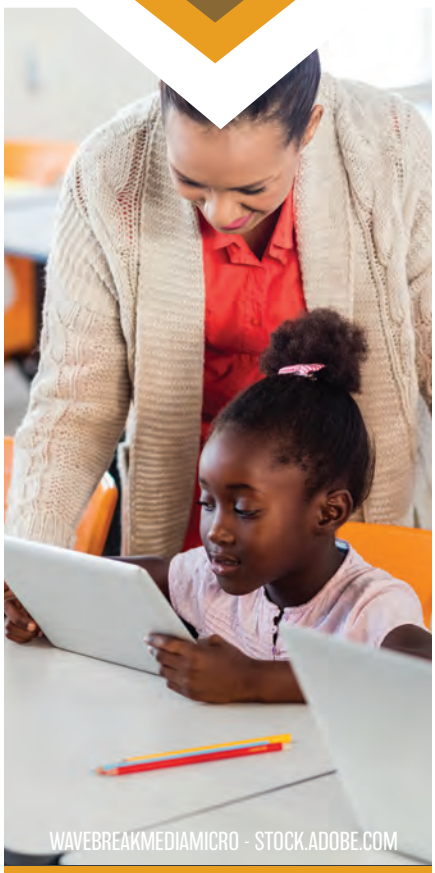
5 schools in WY (13% of WY schools with AP programs) offered an AP Computer Science course in 2016-2017, which is 1 more than the previous year

11 teachers with a computer science endorsement teaching a computer science course, while there were an additional 27 teachers endorsed to teach computer science but not teaching any computer science courses

0 new teachers graduated from universities in Wyoming prepared to teach computer science in 2016

7 SCHOOLS WITH CURRENT APPROVED AP COURSES IN 2017-2018

1. **Central High School, Cheyenne:** Computer Science Principles
2. **East High School, Cheyenne:** Computer Science A and Computer Science Principles
3. **South High School, Cheyenne:** Computer Science Principles
4. **Hot Springs County High School, Thermopolis:** Computer Science A
5. **Kelly Walsh High School, Casper:** Computer Science A: 2 Courses and Computer Science Principles
6. **Sheridan High School, Sheridan:** Computer Science Principles
7. **Wyoming Connections Academy, Cody:** Computer Science A



WAVEBREAKMEDIAMICRO - STOCK.ADOBE.COM

EXPOSURE MATTERS

STUDENTS WHO LEARN COMPUTER SCIENCE IN HIGH SCHOOL ARE

6 TIMES

MORE LIKELY TO MAJOR IN IT AND WOMEN ARE

10 TIMES

MORE LIKELY.

- CODE.ORG

AP COMPUTER SCIENCE IN WYOMING			
Year	Number of AP Computer Science Courses	Number of Students Taking AP Computer Science Exam	Number of Students Passing AP Computer Science Exam
2013-2014	0	0	0
2014-2015	2	0	0
2015-2016	4	6	3
2016-2017	5	21	17

The College Board, AP Program Participation and Performance Data.

BENEFITS OF ADDING COMPUTER SCIENCE

SEAN ROBERTS CODE.ORG

Nationally, there are almost 500,000 open computing jobs—the demand rate of computing jobs in Wyoming is nearly 3.5 times the statewide average. Yet in 2015, Wyoming had only 25 computer science graduates. But computer science is about more than computing jobs. In fact, half of the highest paying jobs in the U.S. require coding skills.

If more Wyoming students graduated with key computing skills, the state could create an enormously attractive market for business. In addition to being a core component of success in college, computing is a key skill in most jobs; 7.7 million jobs use *complex* computing.

With only five schools teaching computer science in the state, the lack of access hurts the state economy and creates major inequities in education, particularly for those groups that have been traditionally underrepresented in computer science. To address the issue of access, as a starting point, states should adopt policies that require high schools to offer at least one computer science course based on rigorous standards. Because this goal can't be reached overnight, schools and state education authorities should plan for effective implementation. Thus far, several states have set goals or mandates for achieving the goal.

By adding Computer Science to the Common Core of Knowledge, Wyoming would join these states and could be a leader in computer science education. Each student would have the opportunity to learn these skills that are critical not only for the current and future job market, but also as a foundation for everyday life.

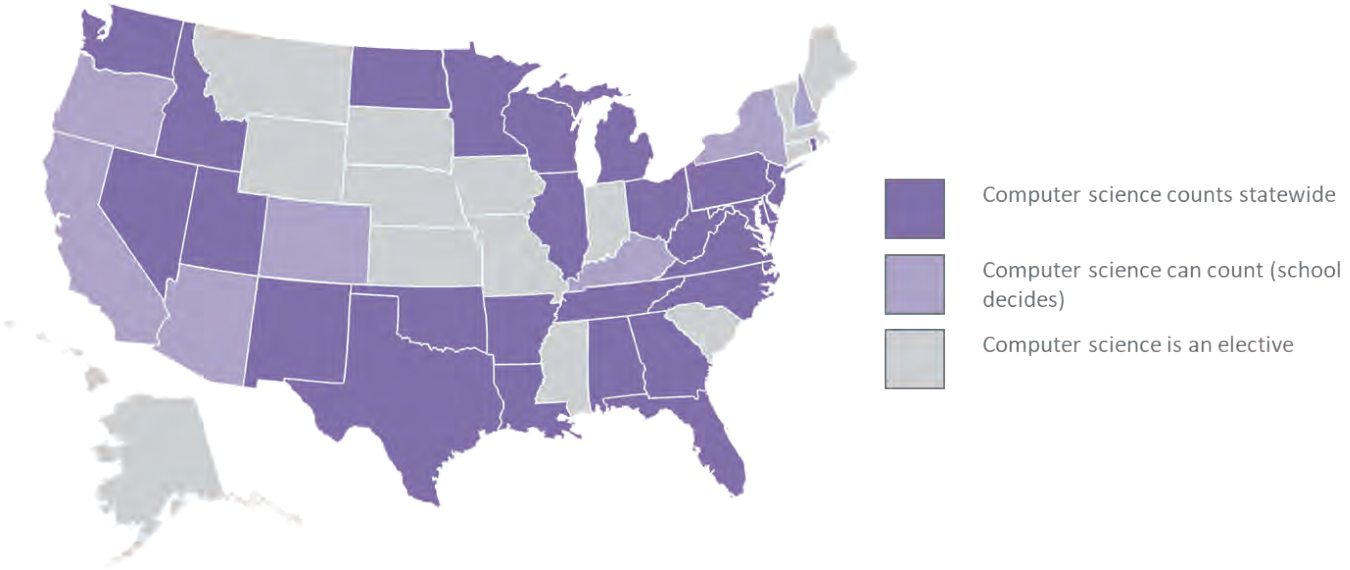
Wyoming students who have had this opportunity have gone on to do amazing things. From developing apps to track cattle vaccinations, to preparing for a career as a geneticist, these students have demonstrated the opportunities that every Wyoming student should have access to- not just the ones who have happened to be fortunate enough to attend one of the five schools in the state that currently offer a course.

It is today's students that will diversify Wyoming's economy and create a better future for our state. Now is the time to act to ensure those students have access to the opportunities that will make that possible.

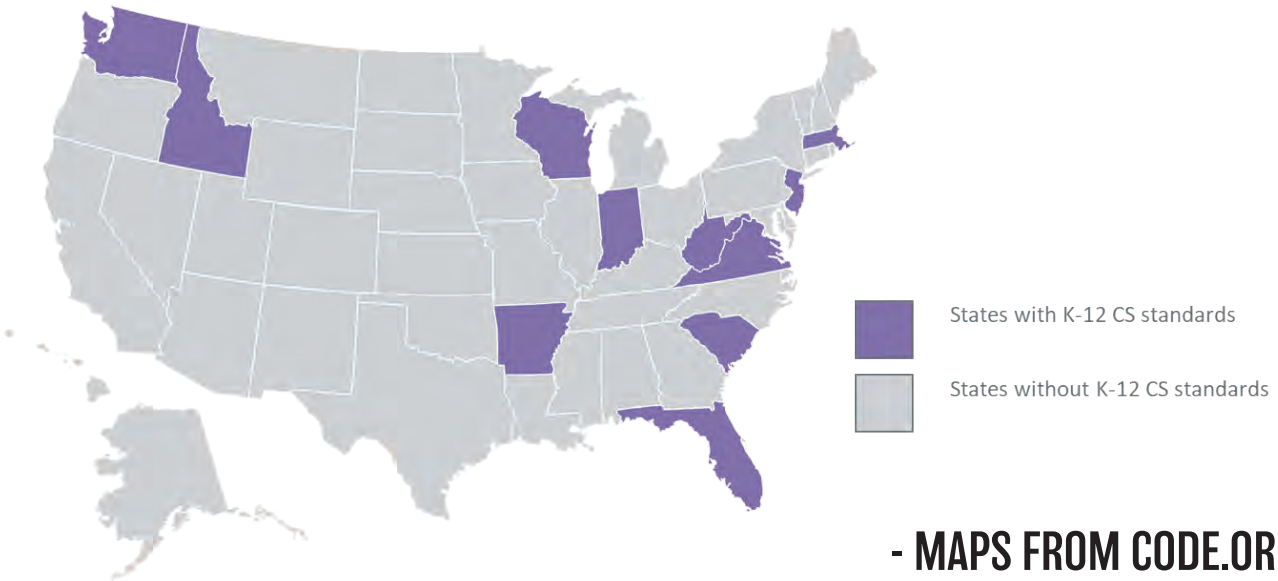
"If more Wyoming students graduated with key computing skills, the state could create an enormously attractive market for business." - SEAN ROBERTS, CODE.ORG

CS can count for graduation in 34 states + DC

In 34 states plus DC, computer science can count towards high school graduation math or science requirements - **up from 12 states in 2013.**



The state of K-12 computer science standards



- MAPS FROM CODE.ORG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Start Early to Prepare Kids for a Digital and Successful Tomorrow

BECCA STEINHOFF WYOMING KIDS FIRST

This publication shares that computer science is a dynamic blend of processes, principles, designs, technology and people. Just like computer science is the foundation for all computing and many related disciplines, the foundation for computer science is a strong understanding of general science, technology, engineering, and math (STEM). To support the future of Wyoming and our nation, the foundation of these skills must be built early along with and in support of language and literacy. A growing number of research studies show that such mutually-enhancing early learning opportunities are fundamental for our children to develop into well-informed, critically-thinking citizens prepared for a digital and successful tomorrow. Conversely, the children who go without those early and continued learning opportunities will be on a trajectory in which they will have great difficulty catching up to their peers.

To initiate a solid foundation of STEM learning into early learning so as to prepare our students for critical thinking and technology opportunities later on in their education, we should consider all the systems surrounding our youngest children: We must prioritize STEM learning, while also engaging members across the child's environments. Both small and large steps can be taken – sequentially and simultaneously – to move in the direction of greater STEM learning in a child's earliest years.

Engage families: Support family confidence and efficacy as their children's first and most important STEM guide and teacher.

- Educators, advocates, and supporters should reach out to families about early STEM learning to build their capacities as first and most important STEM guide and teacher. Communicators should emphasize what STEM learning actually looks like, and provide a variety of clear and accessible examples of STEM exploration (e.g. planting a garden, testing which bath toys float and sink) that make it clear that STEM can happen anytime, anywhere, even with minimal resources.
- Collaborators should work to make comprehensive, long-term training on early parental STEM support more accessible to more families using phone and other technologies.

Support early childhood educators: Improve training and institutional support for teaching early STEM.

- Teacher preparation and training programs, both pre- and in-service, should include interconnected and meaningful subject matter including: STEM content, training in children's developmental learning progressions in STEM, and well-modeled and practiced pedagogy situated in early learning environments.

(Continued on next page)

CONTINUED FROM Starts Early

Connect learning: Support and extend the web of STEM learning across Wyoming.

- Leaders in libraries, museums, and community organizations should prioritize early STEM in informal learning environments. Exhibits and interactive features should involve young children, provide direct instruction for families on how to engage with their children around STEM features, and offer suggestions to continue their learning beyond that environment.
- Education and technology leaders should ensure digital equity by providing access to high-speed Internet and other digital age infrastructure for all families with young children and the professionals who work with them.
- Public and private funders should come together to fund initiatives that support family engagement in STEM learning.

Transform early childhood education: Build a sustainable and aligned system of high quality early learning opportunities from birth - age 8.

- Community and state leaders should consider funding resources to improve general early childhood teaching and quality. Special attention should be paid to address professional preparation, staff development, and continuing education, with responsiveness to the vast disparities in compensation, benefits and work conditions that exist between K-12 educators and their counterparts in early learning settings.
- Community and state leaders should look to recent research and reports such as the Institutes of Medicine and the National Research Council's *Transforming the Workforce for Children birth through Age 8*, and consider implementation of recommendations to further recognize the importance of and investment in early learning so that all children are ready to make the most of opportunities that are provided to them in the K-12 education system and beyond.

HEALTHCARE

KNOWLEDGE OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY IS CRITICAL TO HEALTHCARE AND WILL CONTINUE TO GROW.

Cheyenne Regional Medical Center (CRMC) has grown from a tent hospital in 1867 to high-quality facility addressing the medical needs in Laramie County and the region. CRMC currently employs systems analysts, network engineers, storage and VDI engineers, PC technicians, IT project managers, VOIP engineers, instructional designers, AIX administrators, database administrators, business intelligence analysts, and data warehouse administrators. Salaries range from $33,000 - $120,000, not including executive level IT Management.

"Healthcare is a very technical field, and this will increase in the future," explained Jody Siltzer, CRMC Executive Director of Information Technology.

He added, "I think that taking advantage of the vast amounts of data being gathered is going to affect the way care is performed in the future. Interoperability with other electronic medical records across the globe and using that data to predict possible outcomes as well as help plan different treatment options will be valuable."

TRUCKING

INTEGRATING COMPUTERS AND INFORMATION SYSTEMS INTO TRANSPORTATION IS GOING TO TAKE OFF.

For almost 30 years, Bonneville Transloaders (BT Inc.) has been a transportation company that has been supporting the mineral and petroleum industries in Wyoming and throughout the West. BT Inc. utilizes the latest in onboard computing for better tracking and reports for each truck.

"We have computers in the trucks that track driver logs and various functions of the day to day operation of the trucks including integration into maintenance systems for our shop," said Matt Ivie, Company Systems Administrator with BT Inc.

"Being able to find better ways to gather data from the trucks and quickly receive it and integrate it into other systems for processing and billing and other various administrative functions is going to be one of the biggest areas for improvement."

COMPUTER SCIENCE IS AN ESSENTIAL WORKPLACE SKILL

FROM BURNING GLASS TECHNOLOGIES

Coding skills are essential for half of all occupations in the top earning quartile; that is, jobs with an income of at least $75,000.

Consequently, computer science is increasingly necessary for a chance at a middle-class lifestyle in the 21st Century. Of all middle skill jobs, 80% are digitally intensive. Not to mention, 2.6 million jobs posted over the past year require some coding skills according to Burning Glass Technologies.

Updating K12 education to include computer science is necessary to improve the education to workforce pipeline.

OPENINGS INCLUDE:

IT OCCUPATIONS IN WYOMING
BY INDUSTRY

Information Technology Occupations (Computer Specialists 15-1000) by Industry Sector from 2016 Occupational Employment Survey.

Row Labels	11-3021 - Computer and Information Systems Managers	***15-1000 - Computer Specialists***	15-1121 - Computer Systems Analysts	15-1122 - Information Security Analysts	15-1131 - Computer Programmers	15-1132 - Software Developers, Applications	15-1133 - Software Developers, Systems Software	15-1134 - Web Developers	15-1141 - Database Administrators	15-1142 - Network and Computer Systems Administrators	15-1143 - Computer Network Architects	15-1151 - Computer User Support Specialists	15-1152 - Computer Network Support Specialists	15-1199 - Computer Occupations, All Other
21 - Mining	-	***63***	-	-	-	-	0	0	-	21	0	-	-	0
22 - Utilities	-	***20***	0	-	-	0	0	0	0	-	0	-	-	0
23 - Construction	-	***43***	-	-	24	0	0	0	0	12	0	-	-	0
31-33 - Manufacturing	-	***37***	-	0	-	-	0	0	0	15	-	11	-	0
42 - Wholesale Trade	-	***37***	0	-	0	0	0	-	-	-	0	15	-	-
44-45 - Retail Trade	-	***-***	-	0	0	0	-	-	0	21	0	-	0	0
48-49 - Transportation and Warehousing	-	***10***	0	0	0	0	0	0	0	-	0	-	-	-
51 - Information	14	***238***	20	-	-	-	24	20	-	47	20	58	33	0
52 - Finance and Insurance	-	***66***	10	-	-	-	0	-	-	20	0	14	-	0
53 - Real Estate and Rental and Leasing	-	***-***	0	0	0	-	0	-	0	0	0	-	0	0
54 - Professional, Scientific, and Technical Services	15	***513***	73	0	113	139	-	45	12	32	11	46	27	0
55 - Management of Companies and Enterprises	13	***33***	-	0	0	0	0	0	0	12	0	-	-	0
56 - Administrative and Support and Waste Management and Remediation Services	-	***28***	0	0	-	0	0	0	-	13	0	-	0	0
61 - Educational Services	44	***461***	-	0	32	-	0	24	31	118	0	166	62	-
62 - Health Care and Social Assistance	25	***247***	-	-	-	-	0	-	26	93	0	68	17	-
71 - Arts, Entertainment, and Recreation	-	***-***	0	0	0	0	0	-	-	-	0	-	0	0
72 - Accommodation and Food Services	-	***40***	-	-	0	0	0	-	-	16	-	13	-	0
81 - Other Services (except Public Administration)	0	***16***	0	0	0	0	0	-	0	-	-	-	0	0
92 - Public Administration	59	***664***	27	-	-	-	0	-	100	84	-	182	55	115
Total	201	***2594***	174	-	208	248	-	126	188	530	-	633	232	143

* The dash indicates that there was employment in the occupation and industry but it was suppressed for low numbers or secondary disclosure.

T. Glover, Custom Extract of IT Occupations from 2016 Occupational Employment Statistics Data. Research & Planning, Wyoming Department of Workforce Services. 1/19/2018

MEDICAL INDUSTRY

INFORMATION SERVICES HELP PROVIDE THE SAFEST AND HIGHEST QUALITY OF CARE TO PATIENTS.

Based in Casper, the Wyoming Medical Center has grown from a small hospital serving Natrona County to a sophisticated medical center serving many areas in Wyoming. The medical center has 36 employees classified as IT, making between $50,000 - $100,000.

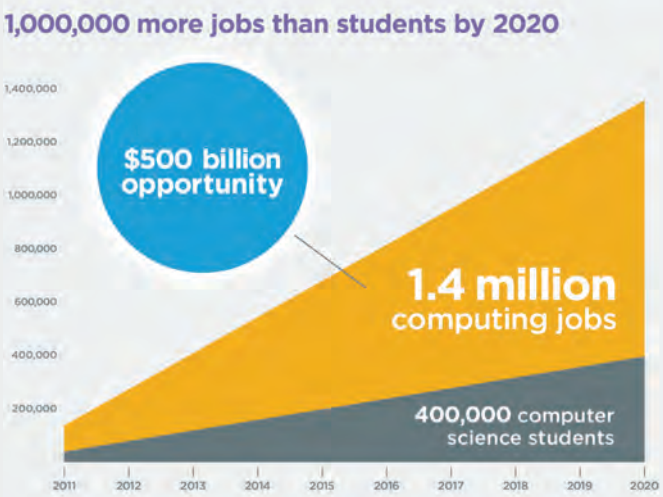
"Computer science will be more and more critical across departments as systems and connected equipment becomes commonplace," said Rob Pettigrew, IT/Clinical Engineering Director at Wyoming Medical Center. "More healthcare positions will find value in this type of education."

WYOMING OCCUPATIONAL EMPLOYMENT AND WAGE ESTIMATE

OCCUPATION CODE/ TITLE	EMPLOYMENT	MEDIAN HOURLY WAGE	MEAN HOURLY WAGE	ANNUAL MEAN WAGE
Computer & Information Systems Managers (11-3021)	200	$41.86	$44.85	$93,280
Computer & Mathematical Applications (15-000)	2650	$28.16	$29.89	$62,170
Computer Systems Analysts (15-1121)	170	$33.12	$33.37	$69,420
Computer Programmers (15-1131)	210	$27.35	$29.16	$60,650
Software Developer, Applications (15-1132)	250	$30.86	$33.04	$68,730
Software Developers, System Software (15-1133)		$38.41	$40.54	$84,320
Web Developers (15-1134)	130	$26.48	$31.51	$65,530
Database Administrators (15-1141)	190	$27.74	$29.53	$61,430
Network & Computer Systems Administrators (15-1142)	530	$31.24	$32.01	$66,590
Computer Network Architects (15-1143)	30			
Computer User Support Specialists (15-1151)	630	$22.29	$22.96	$47,750
Computer Network Support Specialists (15-1152)	230	$27.39	$27.30	$56,700
Computer Occupations, All Other (15-1199)	140	$33.32	$34.54	$71,850

Bureau of Labor Statistics May 2016 State Occupational Employment and Wage Estimates for WY.

Computer science is a top paying college degree and computer programming jobs are growing at 2x the national average.
- WYOMING DEPARTMENT OF EDUCATION



AVAILABLE JOBS IN WYOMING

Wyoming currently has 287 open computing jobs (3.3 times the average demand rate in Wyoming). The existing open jobs represent a $18,145,001 opportunity in terms of annual salaries. - CODE.ORG

WHAT DOES COMPUTER SCIENCE PAY?

$63,223 AVERAGE SALARY FOR COMPUTING OCCUPATIONS

$46,840 AVERAGE SALARY IN THE STATE

- WYOMING DEPARTMENT OF EDUCATION

OIL & GAS SERVICES INDUSTRY

TECHNOLOGY PLAYS A VITAL ROLE IN ALL ASPECTS OF SERVICES PROVIDED TO THE OIL AND GAS INDUSTRY.

Started in 2005 and headquartered in Lyman, Redi Services is an oil and gas industry maintenance and services provider that employs 250 in Wyoming and many others in Colorado, Utah, Idaho, Nevada, and Texas.

"Having workers with a stronger background in computer science and other computer-related areas increases our success as a whole and the success of individuals, which, in turn, creates more content employees," said Gary Condos, Owner and COO of Redi Services. He expects the importance of computer science to grow.

Condos added, "We have recently implemented a Customer Relationship Management (CRM) tool to help us track and increase our efficiency. To fully integrate this, CRM will definitely require the realm of computer science."

Industry Subset 541511 - Custom Computer Programming Services Current Job Openings: 8		
This industry is primarily engaged in writing, modifying, testing, and supporting software to meet the needs of a particular customer. The table below shows the employers summary in Wyoming.		
Company Name	**City**	**Website**
Berts Computer Svc	Buffalo	
Big Horn Technical	Buffalo	www.bighorntech.com
Real Time Inc	Buffalo	realtimerealtyinc.com
Lara Shook Consulting	Carpenter	
Stellar Programming & Consulting	Casper	stellarstar.net
Budack.us	Casper	budack.us
Computing Resources Co	Casper	crcomp.net
Venture Technologies	Casper	ventech.com
Datacorp	Cheyenne	www.mjdatacorp.com
E R C Computing	Cheyenne	
Trusted Technology Firm	Cheyenne	
Options & Choices	Cheyenne	www.integratedrmis.com
Atatek Corp	Cheyenne	webbinars.com
Choice Tech Solutions	Cheyenne	
Ids Solution Inc	Cheyenne	
T98 Corp	Cheyenne	t98corp.com
P C Cowboys	Cody	wysri.com
Concert Tech	Gillette	concert-tech.com
Jem Computer Consulting	Jackson	abcjem.com
Concert Tech	Jackson	
Mountain States Consulting	Jackson	msc-lims.com
Perfect Solutions Indexing	Kemmerer	
Lartech Inc	Laramie	www.lartech.net
Mks Technology	Laramie	wysri.com
Fire Hole Composite	Laramie	compositestoolkit.com
Concert Tech	Laramie	
Blue Sky Technologies	Laramie	blueskytp.com
Happy Jack Software Llc	Laramie	wynursing.org
Heart Mountain Computing	Powell	
Concert Tech	Riverton	concert-tech.com
Just 4 U Computer Svc	Rock Springs	
Sheridan Computer Sales & Srv	Sheridan	ramacocoal.com
Data Design & Development	Sheridan	
Mountain Computer Svc	Sundance	mountaincomputerservices.com
Russell Business Svc	Torrington	clutchjob.com
Kingdom Software	Torrington	www.kingdomsoftware.com
Goshen Courthouse It Dept	Torrington	
Futurum Technologies Llc	Wheatland	

Employer information is provided by Infogroup®, Omaha, NE, 800/555-5211.

ENERGY INDUSTRY ARTIFICIAL INTELLIGENCE

Dan Walker, who leads the emerging technology team in BP's Group Technology, states that most areas of the oil and gas industry involve computer science problems that could lend themselves to AI solutions.

"AI could help us to optimize well design and specify procedures to ensure that every well is drilled as efficiently and safely as possible, for example..... It could help us to improve equipment reliability and predict maintenance requirements of our facilities."

- ARTIFICIAL INTELLIGENCE: TURNING FANTASY INTO REALITY, BP GLOBAL

SURVIVAL ANALYSIS

"Instead of taking an oil well offline for three days to repair damage from equipment failure, proactive action enabled by data science can reduce downtime to a single day," said Francisco Sanchez, President of Houston Energy Data Science. "Saving a day of downtime is valuable. A day's production at a small site – 1,000 barrels of oil – represents $30,000 of revenue at current prices."

- HOW DATA SCIENCE IS CHANGING THE ENERGY INDUSTRY, CIO FROM IDG

NATURAL GAS PRODUCER

IN THE OIL AND GAS INDUSTRY, A COMPUTER SCIENCE BACKGROUND IS NEEDED FOR JOBS IN FIELD OPERATIONS, GEOLOGICAL INFORMATION SYSTEMS, AND ENGINEERING.

Jonah Energy is one of the largest privately-held natural gas producers in the nation. The Jonah Field in Sublette County was the first acquisition in 2014. The company employs about 200 workers in Wyoming.

"Understanding data and being able to utilize it to make optimal decisions in every aspect of an energy company's operations are becoming a requirement, and computer science is one of the ways to accomplish the demands," said Shaam Farooq, Director and Chief Information Officer for Jonah Energy. However, he added finding the required computer science skills in Wyoming is rare.

"The energy industry is seeing considerable disruption through technology, to understand this technology it needs employees with computer science and related skills," Farooq added. "It is not just sufficient to be able to use a multimillion-dollar software systems, to apply that understanding and evolve it into solutions for asset management, production prediction, machine learning, artificial intelligence, etc. will drive profitability, lower costs of production and drive energy companies' growth into the next decade."

COMPUTING IS #1

Computing occupations are the number 1 source of all new wages in the U.S. and make up two-thirds of all projected new jobs in STEM fields, making Computer Science one of the most in-demand college degrees. - CODE.ORG

Industry Subset - 511210 - Software Publishers
Current Job Openings: 4

This industry comprises establishments primarily engaged in computer software publishing or publishing and reproduction such as designing, providing documentation, assisting in installation, and providing support services to software purchasers. The table below shows the employers summary in Wyoming.

Company Name	City	Website
Sitech	Casper	www.SITECHWY.com
Tsr Inc	Casper	
Silver Vine Llc	Cheyenne	
Change Healthcare	Cheyenne	www.changehealthcare.com
Mixio Labs	Cheyenne	www.mixiolabs.com
Portable Software Co	Cheyenne	www.PTSW.com
Tribal Software Inc	Cheyenne	www.tribalsoftware.com
Clear Mountain Software Inc	Cheyenne	www.reactinvestor.com
Electronics Boutique	Cheyenne	
Tsr Inc	Cheyenne	
Encanvas	Cheyenne	
Cantech Holding Inc	Cheyenne	
Rimits Inc	Cheyenne	
New Node Llc	Cheyenne	
Ably Inc	Cheyenne	www.ably.eu
Welcome To Worksright Software	Cheyenne	www.persoftware.com
Per Office Software	Cheyenne	
Transcore	Evanston	
Software Solutions Inc	Evanston	www.iss-providers.com
Tsr Inc	Jackson	
Xssentials	Jackson	
Software Gallery Llc	Laramie	www.softwaregallery.com
Aristatek Inc	Laramie	www.aristatek.com
Happy Jack Software Inc	Laramie	www.happyjacksoftware.com
Woundright	Laramie	www.woundrightapp.com
Careright Technologies	Laramie	
Handel Information Techs	Laramie	www.handelit.com
Walking Man Software	Pinedale	
Powder River Shredders Llc	Wright	www.powderrivershredders.com

Employer information is provided by Infogroup®, Omaha, NE, 800/555-5211.

Industry Subset 541512 - Computer Systems Design Services
Current Job Openings: 8

Primarily engaged in planning and designing computer systems that integrate computer hardware, software, and communication technologies including integration design consulting services, information management computer systems integration design consulting services, local area network computer systems integration design services, and office automation computer systems integration design services. The table below shows the employers summary in Wyoming.

Company Name	City	Website
Elime Design Studio	Casper	www.elimedesign.com
Elogic Inc	Casper	www.elogicbas.com
Altered Images	Casper	www.alteredimgs.com
Next Step Design Solutions	Casper	www.wyominganglers.com
Information Systems Consltng	Casper	www.isccorp.net
Waves Web Design	Casper	www.waveswebdesign.com
Api Systems Integrators Inc	Casper	www.apisystemsintegrators.com
Me Dezign	Cheyenne	www.medezign.com
Design Asylum	Cody	www.designasylumstudio.com
Cowgirl Creations Web Design	Gillette	www.cowgirlcreationswebdesign.com
Rigdata	Gillette	www.rigdata.com
Webpros Media	Gillette	www.webprosmedia.com
High Planes Performance	Glenrock	
Gliffen	Jackson	www.gliffen.com
Skyfire Studio	Jackson	www.skyfirestudio.com
Competitive Edge Tech Inc	Jackson	www.waywired.com
Smash Lunch Media	Laramie	
J Designs	Newcastle	www.jdesigns.info
Medfunnel Llc	Sheridan	
Wild West Media		

Employer information is provided by Infogroup®, Omaha, NE, 800/555-5211.

FAST FACTS

85% of jobs that will exist in 2030 don't exist yet
- DELL TECHNOLOGIES, INSTITUTE FOR THE FUTURE

71% of new STEM jobs are in computer science
- CODE.ORG

WYOMING EXCELS

EDUCATION IS EVERYONE'S BUSINESS

Wyoming Excels is working to improve our education-to-workforce pipeline by ensuring all students graduate with the knowledge, skills, and behaviors necessary to succeed in a competitive global economy. Wyoming Excels, a non-profit, is a program of the Wyoming Heritage Foundation and is funded through a grant by the Daniels Fund.

OUR WORK IS GUIDED BY FIVE CORE PRINCIPLES

STUDENT-FOCUSED

Placing the highest priority on the best outcomes for students of all ages

EDUCATIONAL EXCELLENCE

Ensuring Wyoming provides excellent educational opportunities for every student

TRANSPARENCY

Enabling public access to clear and detailed financial and performance data

RETURN ON INVESTMENT

Effectively investing limited resources to achieve desired student outcomes

CHOICE & INNOVATION

Empowering parents and students to choose – and educators to create – the best learning environment

POLICY PRIORITIES FOR 2018

COMPUTER SCIENCE

In the digital economy, computer science literacy and computational thinking are necessary life skills for economic opportunity and social mobility. Expansion of computer science at every grade level not only provides students with "basic" life skills, but also supports job growth and innovation in Wyoming's economy.

SKILLS GAP

The lack of skilled workers will result in less investment, which stifles growth opportunities, hurts product development, and reduces profits. Data-driven decision-making to better align workforce and education investments with employer skill needs will help close the gap.

EDUCATOR TRAINING & PROFESSIONAL DEVELOPMENT

High quality initial educator preparation and ongoing professional development opportunities for P-12 educators are necessary for the education system to be responsive to an ever-evolving, increasingly connected world and to produce high school graduates who are among the most skilled and best educated in the nation.

READ-BY-THREE

Illiteracy creates a gap between the workforce and business needs, decreasing productivity and profits. Only 41 percent of Wyoming 4th graders tested proficient or above on the NAEP 2015 assessment. Students who don't read proficiently by third grade are four times likelier to drop out of high school.

Wyoming EXCELS

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