

Computer Science Skills, Opportunities and Careers

Information Session for Parents, Teachers and Guests
June 2, 2018

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CS4HS Itinerary

- 9:00 – 9:30 Registration, Set Up, Refreshments
TECH Building Lobby
- 9:30 – 9:45 Welcome!
- 9:45 – 11:45 Showcase and Competition
TECH Building Lobby and Classrooms
- 9:45 – 11:45 Hour of Code, Student Guests, TECH 244
- 9:45 – 10:45 Computer Science Information Session, Parents, Teachers and Guests, Williamsville Schools, TECH 160
- 10:45 – 11:45 Computer Science Information Session, Parents, Teachers, Guests, All schools except Williamsville, TECH 160
- 12:00 – 12:30 Lunch, Bulger North Classroom
- 12:30 – 1:30 Award Ceremony, Bulger North Classroom

Google's Commitment



Google is committed to supporting professional development of teachers through CS4HS

Global Impact since 2009

- 50,000+ Teachers
- 50 Countries
- 2,000,000 Students

Source: https://edu.google.com/computer-science/educator-grants/#?modal_active=none, 2018



- Began in 2012
- First Student Competition, 2013
- 25 new teachers participate annually
- Our Shared Success
 - 125+ teachers
 - 55+ Secondary Schools from WNY

CS4HS, 2017-2018

Region	Organizations Funded
<u>United States and Canada</u>	27
<u>Europe, the Middle East and Africa</u>	28
<u>Australia and New Zealand</u>	27
<u>China</u>	25

Source: https://docs.google.com/document/d/1mf7AgJNFXxnFo8HC2_jlmlP78gB2S3fI4laKBMr2TtE/edit, 2018

Google at Amherst Central Schools

Gmail, G Suite for Education and Chromebooks

https://edu.google.com/latest-news/stories/amherst-central-schools/?modal_active=none

Google Expeditions in Brooklyn, NY

Virtual Field Trip to Montana

<https://www.youtube.com/watch?v=PRO7EFeeR>
II

1:17 minutes

How Search Works



- <https://code.org/educate/resources/videos>

5:12 minutes

Interactive Map Statistics for each state

<https://code.org/promote>



NY Smart Start Program

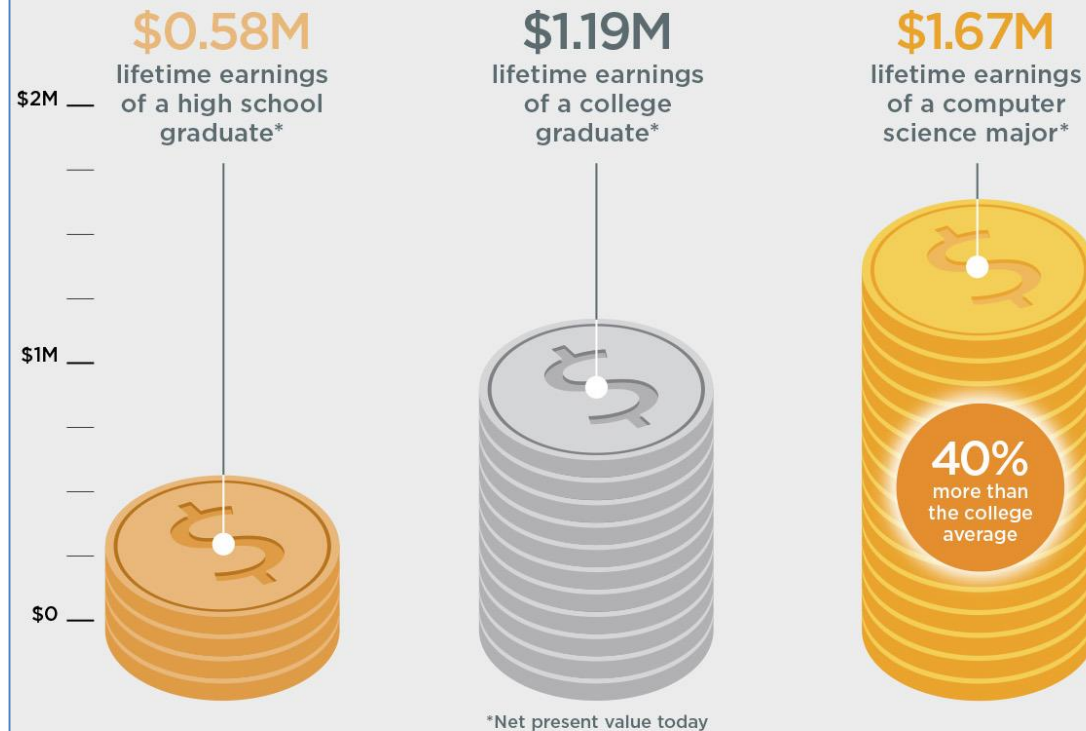


- Provides \$6 million to expand high-quality Computer Science and Engineering education
- Grants will support teachers with resources and professional development
- Budget advances legislation to convene a working group of industry leaders and top educators to create model Computer Science Standards to be made available to any school

Source: NY State Budget 2019

Career Opportunities

The value of a computer science education



A computer science major can earn 40% more than the college average.

Source: code.org/promote, May 2016

Career Opportunities



- Business Applications
- Hardware
- Networking
- Telecommunications
- Technology Management
- Information Security
- Entertainment
- Gaming
- Data Mining, Informatics
- Industry Specific Applications

Career Opportunities

Variety of Occupations within Computer Science

<http://www.computerscience.org/careers/>

Occupational Outlook

US Bureau of Labor Statistics 2017-2018


UNITED STATES DEPARTMENT OF LABOR

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OCCUPATIONAL OUTLOOK HANDBOOK

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Computer and Information Technology Occupations

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Employment of computer and information technology occupations is projected to grow 13 percent from 2016 to 2026, faster than the average for all occupations. These occupations are projected to add about 557,100 new jobs. Demand for these workers will stem from greater emphasis on cloud computing, the collection and storage of big data, and information security.

The median annual wage for computer and information technology occupations was \$84,580 in May 2017, which was higher than the median annual wage for all occupations of \$37,690.

	OCCUPATION ▲	JOB SUMMARY	ENTRY-LEVEL EDUCATION 🌐 ▲	2017 MEDIAN PAY 🌐 ▲
	Computer and Information Research Scientists	Computer and information research scientists invent and design new approaches to computing technology and find innovative uses for existing technology. They study and solve complex problems in computing for business, medicine, science, and other fields.	Master's degree	\$114,520
	Computer Network Architects	Computer network architects design and build data communication networks, including local area networks (LANs), wide area networks (WANs), and Intranets. These networks range from small connections between two offices to next-generation networking capabilities such as a cloud infrastructure that serves multiple customers.	Bachelor's degree	\$104,650

<https://www.bls.gov/ooh/computer-and-information-technology/home.htm>

Source: U.S. Bureau of Labor Statistics, 2018

CS4HS June 2018 Dillon

Career Opportunities

Occupational Outlook Handbook

U.S. Bureau of Labor Statistics

Systems Analyst-

<http://www.bls.gov/ooh/Computer-and-Information-Technology/Computer-systems-analysts.htm#tab-1>

After entering this site you can select any job title

<https://www.bls.gov/ooh/computer-and-information-technology/home.htm>

IT Job Titles

the balance careers

<https://www.thebalancecareers.com/list-of-information-technology-it-job-titles-2061498>

Occupational Outlook

US Bureau of Labor Statistics 2016-2017

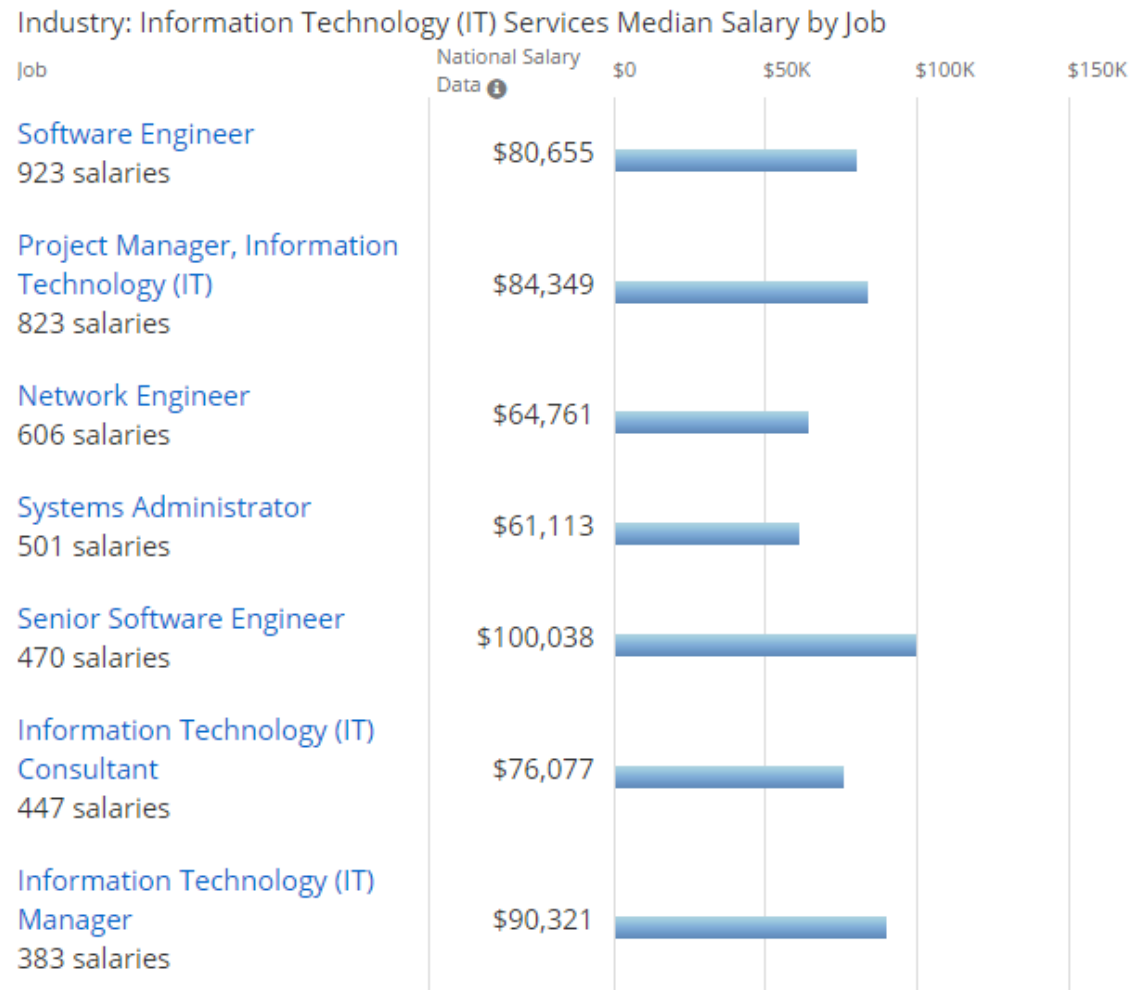
Lots of Jobs, High Pay

Given commensurate levels of education and time to graduation, computing occupations are more stable and pay better than other jobs.

Preparation	Sample Occupation	Projected growth by 2024	Median Annual Salary/Hourly Wage (2014)
2-year Degree or Equivalent Military Training	Computer Support Specialist	12%	\$50,380/\$24.22
	Environmental Engineering Technician	10%	\$48,170/\$23.16
	Medical Record, Health Information Technician	15%	\$35,900/\$17.26
	Web Developer	27%	\$63,490/\$30.52
4-year or Advanced Degree	Database Administrator	11%	\$80,280/\$38.60
	Software Developer	30%	\$90,530/\$43.52
	Computer Systems Analyst	21%	\$82,710/\$39.76
	Computer Scientist	11%	\$108,360/\$52.09

Source: U.S. Department of Labor, Occupational Outlook Handbook, 2016-17 Edition.

Local Salary Information



Currency: USD | Updated: 6 May 2017 | Individuals Reporting: 32,869 | [About This Data](#)

Top 10 Jobs in Computer Science

Top 10 Jobs In Computer Science

Software Developer

Database Administrator

Computer Hardware Engineer

Computer Systems Analyst

Computer Network Architect

Web Developer

Information Security Analyst

Computer Programmer

Computer and Information Systems Manager

Project Manager

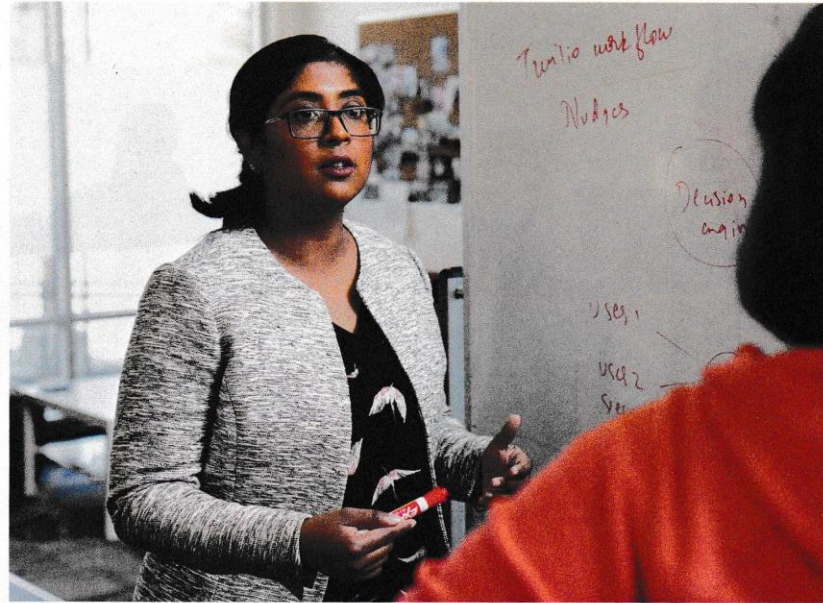
Software Development!

Work

These Women Have the Hottest Job in America

Long hours, constant learning—and big pay. Inside the life of a software developer.

BY KRISTEN BAHLER



Source: *Money Magazine*, April 2018, pp. 20-21.

“65% of students will work with jobs that don’t exist today.”

-Google

Source: code.org/promote, May 2018

New Applications

Sweden's UnStaffed Food Shop



Source: Associated Press, apnews.com/bf2639e442a444768caafa2a7fb78984

Facebook's Data Center



- Facebook's Pineville, Oregon Data Center

<https://www.youtube.com/watch?v=9YsMPvS-fBI>

8:20 minutes

Hour of Code is Here



Video Resources

<https://code.org/educate/resources/videos>

Job Sites



Buffalojobfinder.com , Buffalo News, Tuesday Special Section

Buffalojobs.com

Dice.com

Indeed.com

Jobs.com

Monster.com

Careerbuilder.com

Simplyhired.com

Wnyjobs.com

Craigslist.com, often company name is unavailable



LinkedIn

- www.linkedin.com

Resume Tips

- Include Cover Letters
- Perfect Grammar!
- Emphasize Experience
- Include Strong Key Words
- Scan Friendly

NEVER include social security number on resumes or applications!!

Birth Date is legally not required.

Interviewing

- Research the company
 - Have a list of questions ready
 - Make sure you understand the company and the position for which you are interviewing
- Be confident when you discuss your qualifications
- Be prepared to discuss technologies you enjoy
- Dress for success

Tips for Success

- When applying for positions online, be aware of job requirements
 - Keywords must 'match'
 - Resumes are selected electronically
- Be honest and ethical
- Work hard
- Develop a good rapport with peers, users and management
- Use common sense

Thank You!