Welcome to CS4HS

Computer Science
Skills, Opportunities and Careers

Information Session for Parents, Teachers and Guests
May 20, 2017

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CS4HS Itinerary, Group 1

- 9:00 – 9:30   Registration, Set Up, All Projects, TECH Building Lobby
- 9:30 – 9:45 Welcome!
- 9:45 – 10:45 Judging: Posters, Robotics, Web Design, Group 1
- 10:00 – 12:00 Hour of Code: Student Guests, Tech 244
- 11:00 – 12:00 Computer Science Information Session: Parents, Teachers and Guests, TECH 160
- 12:00 – 12:30 Lunch: Students, Parents, Guests
- 12:30 – 12:45 Group Photo (Outside Tech Building)
- 12:45 – 1:15 Award Ceremony: Classroom Building, C122

CS4HS Itinerary, Group 2

- 9:00 – 9:30   Registration, Set Up, All Projects, TECH Building Lobby
- 9:30 – 9:45 Welcome!
- 10:00 - 11:00   Computer Science Information Session: Parents, Teachers and Guests, TECH 160
- 10:00 – 12:00 Hour of Code: Student Guests, TECH 244
- 11:15 – 12:30 Judging: Computer Programs and Computer Games
- 12:30 – 12:45 Group Photo (Outside Tech Building)
- 12:45 – 1:15 Lunch: Students, Parents, Guests
- 1:15 – 2:00 Award Ceremony: Classroom Office Building, C122
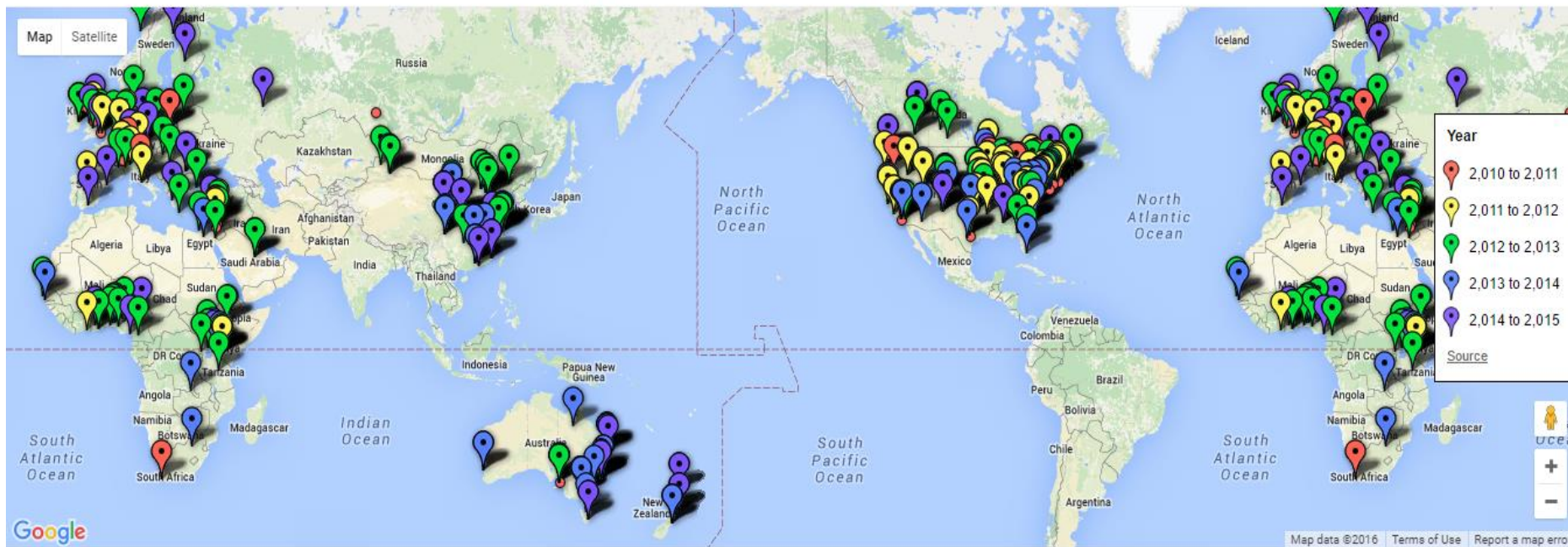
CS4HS

Source: http://cs4hs.com/past-programs/

Google's Commitment

Google is committed to supporting professional development of teachers through CS4HS

Global Impact since 2009

- 40,000+ Teachers

- 40 Countries

- 1,000,000 Students

Source: https://www.cs4hs.com/index.html May 2017

CS4HS at SUNY Buffalo State

- Began in 2012

- First Student Competition, 2013

- 25 new teachers participate annually

- Our Shared Success
  - 100+ teachers
  - 50+ Secondary Schools from WNY

Source: https://www.cs4hs.com/index.html May 2017

Google's Data Center

Tour of Google's South Carolina Data Center
Hosted by Google's Vice President of Data Centers

https://www.youtube.com/watch?v=XZmGGAbHqa0

Code.org

"Every student in every school should have the opportunity to learn computer science."
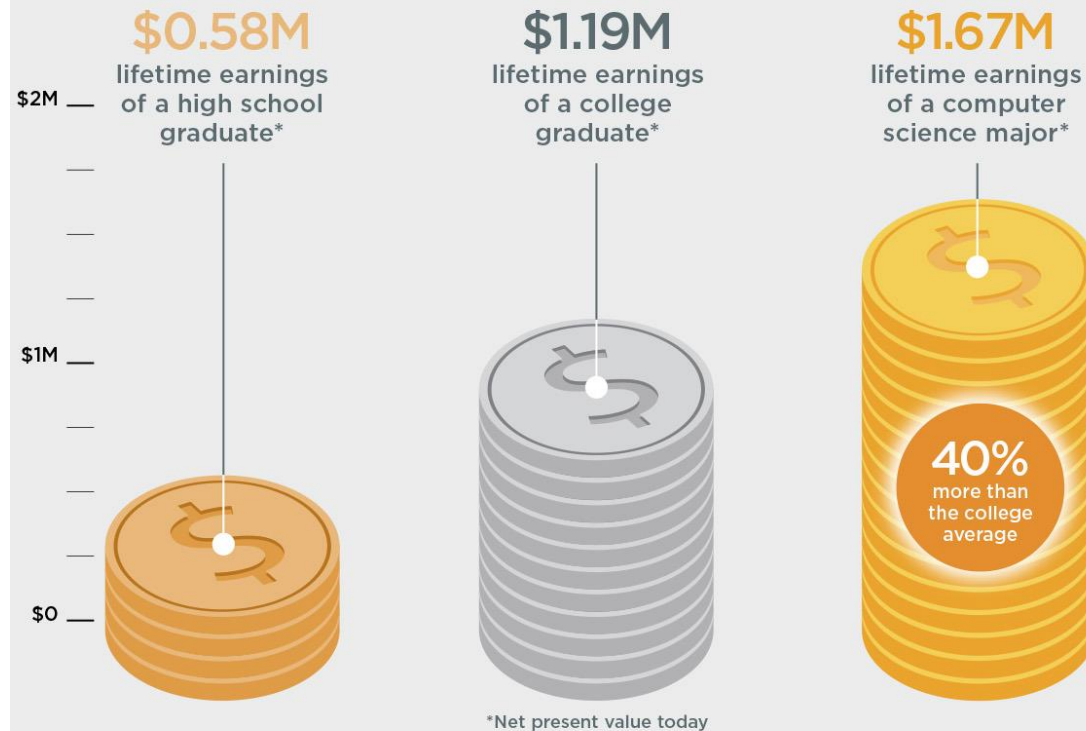
- code.org

Source: code.org/promote, May 2016

Computing Occupations
Largest Category of New Wages in the US
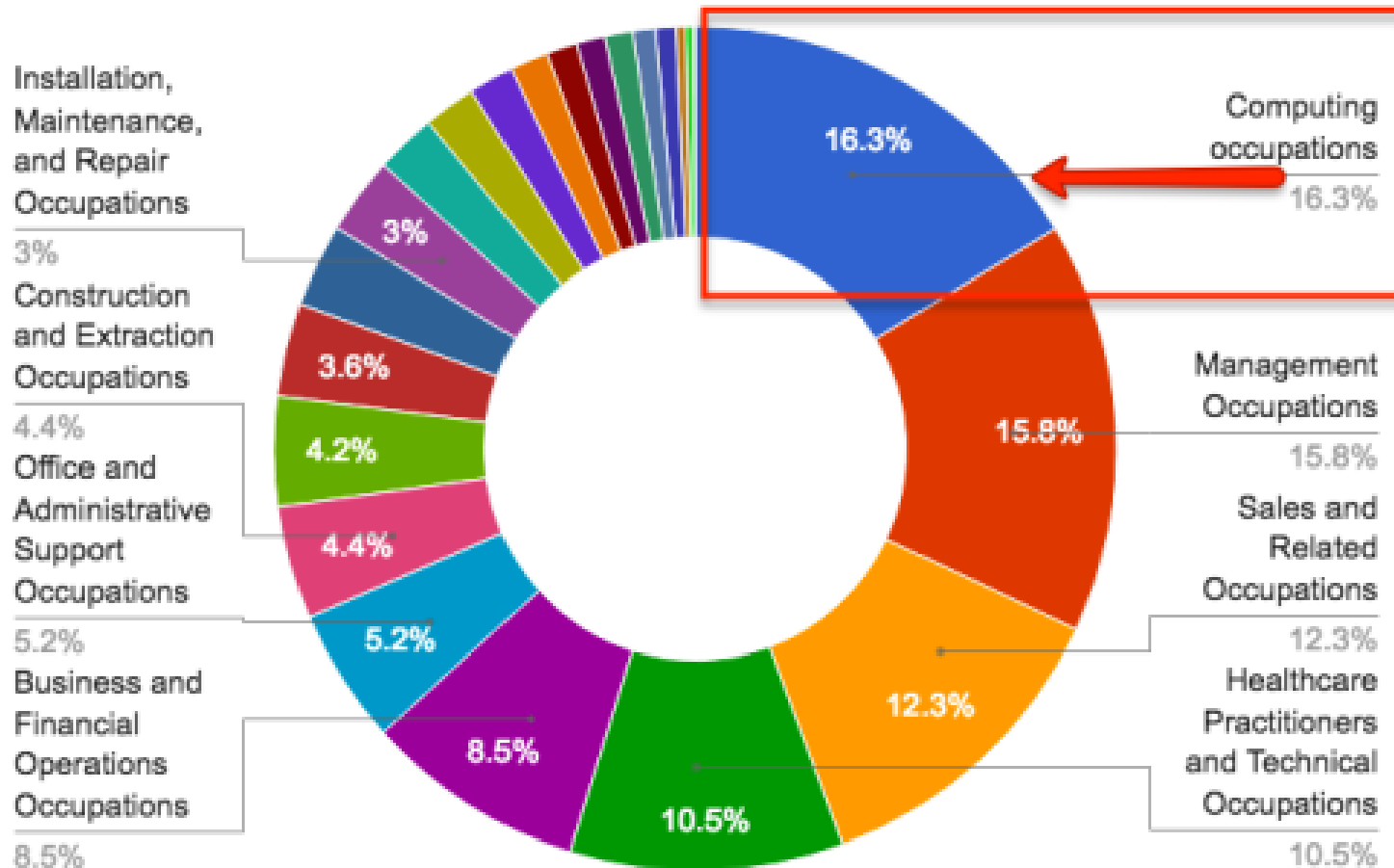
Source: code.org/promote, May 2016

Career Opportunities

The value of a computer science education

$0.58M
lifetime earnings
of a high school
graduate*

$1.19M
lifetime earnings
of a college
graduate*

$1.67M
lifetime earnings
of a computer
science major*

$2M

$1M

$0

40%
more than
the college
average

*Net present value today

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

Source: code.org/promote, May 2016

Interactive Map Statistics for each state

https://code.org/promote

Career Opportunities

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

Career Opportunities

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

A few words from familiar visionaries

- https://www.youtube.com/watch?v=nKIu9yen5nc

How Technology Benefits Business

- Computer Systems
- Email
- Internet
- Video Conferencing
- Document Sharing
- Company Intranets and Extranets
- Social Media
- Smart Phones
- GPS Satellites and RFID
- Emerging Technologies

Reduced costs for Telecommunications Networks makes technology even more attractive

Occupational Outlook
US Bureau of Labor Statistics

OOH HOME | OCCUPATION FINDER | OOH FAQ | OOH GLOSSARY | A-Z INDEX | OOH SITE MAP | EN ESPAÑOL

Search Handbook [Go]

OCCUPATIONAL OUTLOOK HANDBOOK

Computer and Information Technology >

EN ESPAÑOL   PRINTER-FRIENDLY

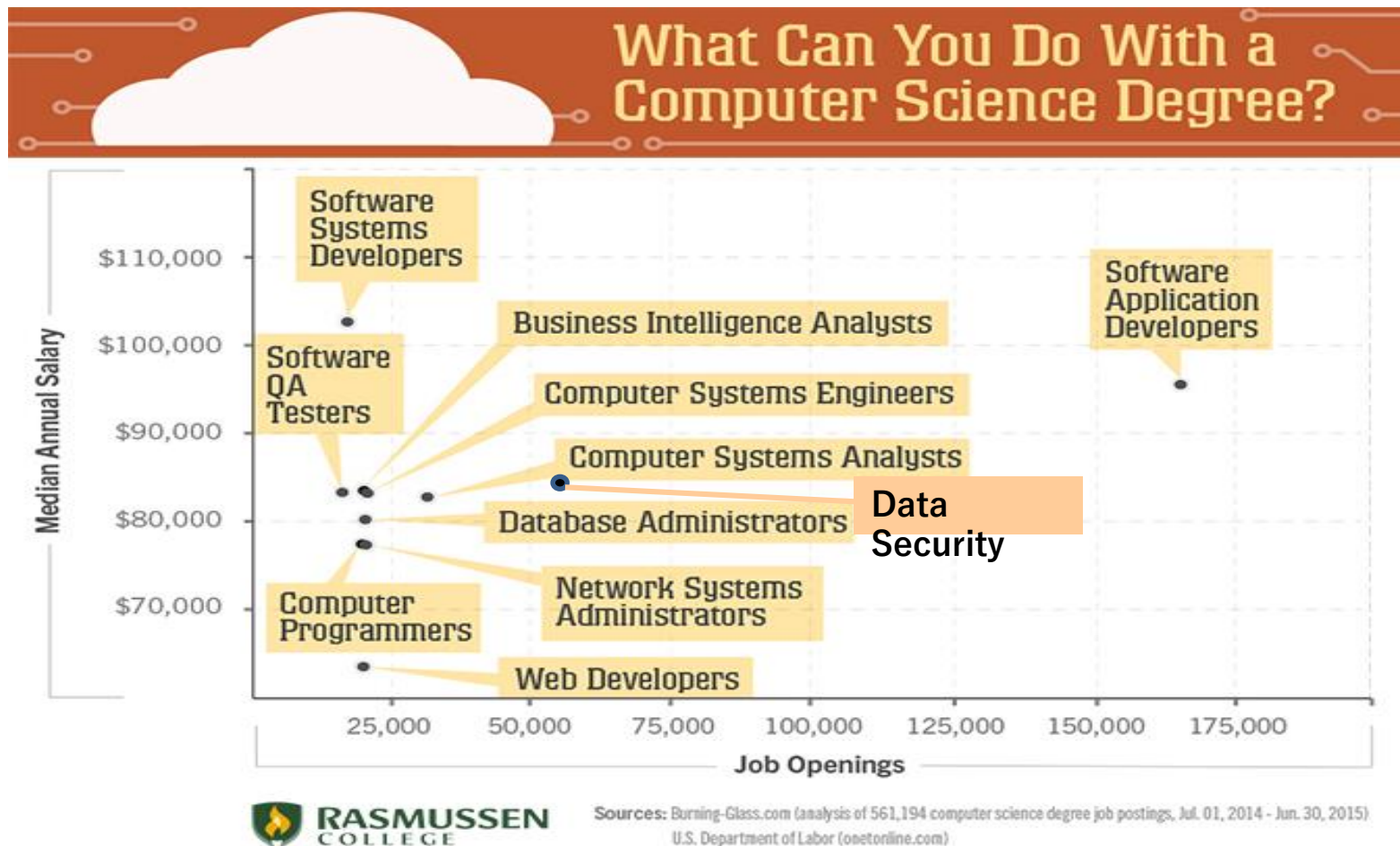# Computer and Information Technology Occupations

Employment of computer and information technology occupations is projected to grow 12 percent from 2014 to 2024, faster than the average for all occupations. These occupations are expected to add about 488,500 new jobs, from about 3.9 million jobs to about 4.4 million jobs from 2014 to 2024, in part due to a greater emphasis on cloud computing, the collection and storage of big data, more everyday items becoming connected to the Internet in what is commonly referred to as the "Internet of things," and the continued demand for mobile computing.

The median annual wage for computer and information technology occupations was $82,860 in May 2016, which was higher than the median annual wage for all occupations of $37,040.

Source:https://www.bls.gov/ooh/computer-and-information-technology/home.htm 2017

Careers in Computing

What Can You Do With a Computer Science Degree?

Median Annual Salary vs. Job Openings

- Software Systems Developers — ~$102,000
- Software QA Testers
- Business Intelligence Analysts
- Computer Systems Engineers
- Computer Systems Analysts
- Database Administrators
- Data Security
- Network Systems Administrators
- Computer Programmers
- Web Developers
- Software Application Developers

$110,000 — $100,000 — $90,000 — $80,000 — $70,000

Job Openings: 25,000 — 50,000 — 75,000 — 100,000 — 125,000 — 150,000 — 175,000

RASMUSSEN COLLEGE

Sources: Burning-Glass.com (analysis of 561,194 computer science degree job postings, Jul. 01, 2014 - Jun. 30, 2015)
U.S. Department of Labor (onetonline.com)

Source: https://www.google.com/imgres?imgurl=http://www.rasmussen.edu/~/media/images/blogs/school-of-technology/what-can-you-do-with-computer-science-degree.ashx%3Fla%3Den&imgrefurl=http://www.rasmussen.edu/degrees/technology/blog/what-can-you-do-with-computer-science-degree/&h=561&w=675&tbnid=mkbaHfngp1cf7M:&tbnh=160&tbnw=192&docid=LBsy_QTTqauynM&usg=__39LDC-6IAs4yF7Ol99xHB1LpAQY=&sa=X&ved=0ahUKEwithrOWilzNAhWFWz4KHcttCm4Q9QEIIDAA#h=561&tbnh=160&tbnw=192&w=675

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.

Source: ncwit.org 2016

Occupational Outlook Handbook
U.S. Bureau of Labor Statistics

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

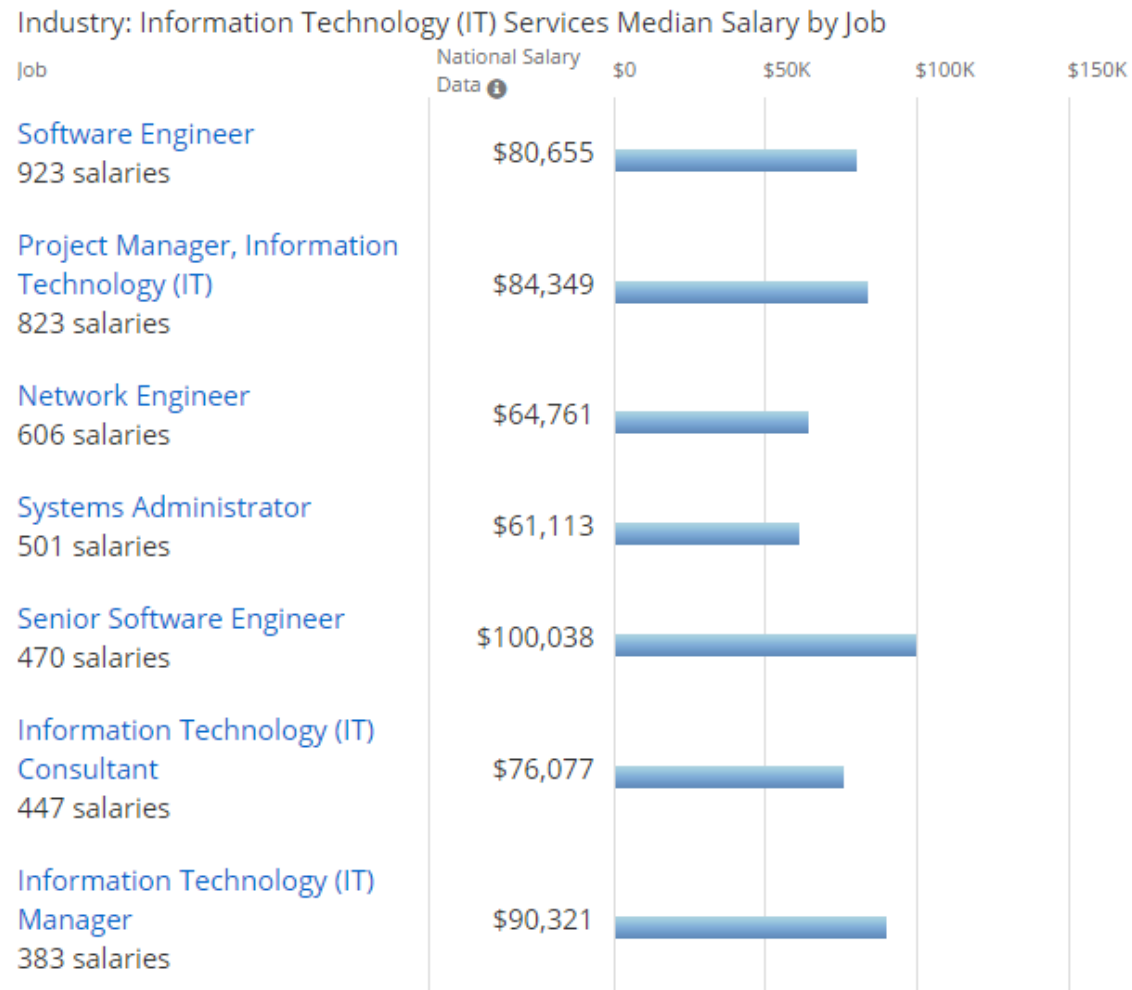After entering this site you can select any job title

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

US News and World Report
Best Jobs in Computing

http://money.usnews.com/careers/best-jobs/rankings/best-technology-jobs

Local Salary Information

Industry: Information Technology (IT) Services Median Salary by Job

Job	National Salary Data
Software Engineer 923 salaries	$80,655
Project Manager, Information Technology (IT) 823 salaries	$84,349
Network Engineer 606 salaries	$64,761
Systems Administrator 501 salaries	$61,113
Senior Software Engineer 470 salaries	$100,038
Information Technology (IT) Consultant 447 salaries	$76,077
Information Technology (IT) Manager 383 salaries	$90,321

Currency: USD | Updated: 6 May 2017 | Individuals Reporting: 32,869 | About This Data

Source: Payscale.com May 2017

Computer Science is Changing EVERYTHING

https://www.youtube.com/watch?v=QvyTEx1wyOY

An Hour of Code

Encourage your school to sponsor

An Hour of Code

Opportunities for all ages

https://code.org/learn

Source: code.org/promote, May 2016

Further Reading

- "Computer Science Students Are In Demand and They Know It", by Phil Johnson, IT World, July 2015 http://www.itworld.com/article/2945674/careers/computer-science-students-are-in-demand-and-they-know-it.html

- "A Guide to Computer Science Careers", by Michael Hoffman, Computer Science Online, 2016

- http://www.computerscienceonline.org/careers/

Videos from Code.org

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

<u>NEVER</u> 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!