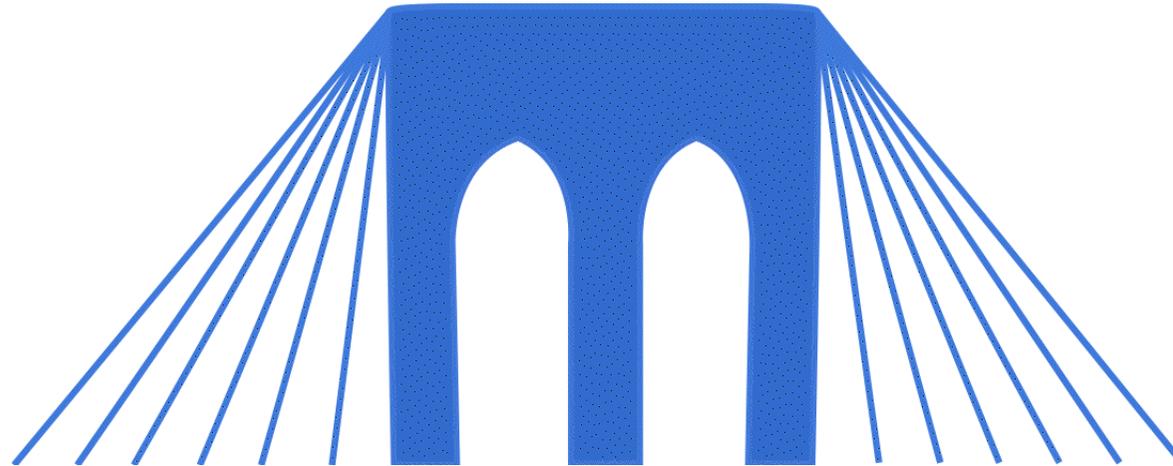


BRIDGES TO COMPUTING



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Careers in Computing

How computer science can help you realize your goals.

M. Meyer
Bridges To Computing
Brooklyn College

What are your goals?

- "If you want to live a happy life, tie it to a goal."
- Albert Einstein
- "Goals that are not written down are just wishes."
- Henry Ford
- Take a moment and ask yourself:
 - What are your goals (large and small)?
 - What are your dreams?
 - What do you want out of life?
- Now, write at least 5 of those things down.
 - Examples: Get a new XBOX 360, own a Home, visit Italy, go skydiving, find a solution to the Global Warming problem.

What is your plan?

- “You need a plan to build a house. To build a life, it's even more important to have a plan.”
- Zig Ziglar
- “Always have a plan, and believe in it. Nothing worthwhile happens by accident.”
- Knox, Chuck
- What careers interest you? Why? Remember, a career is **NOT** the same as a job.
- Now, write down 3 careers that interest you.
 - Examples: Firefighter, Lawyer, Accountant

Tools & Skills

- "A hammer is an extension of the fist. But a computer is an extension of the brain."
- Different careers will require different tools and different skills.
 - Some skills are "transferable"; useful in more than one career.
- How many of the careers you listed will involve using a computer?
 - How many of the careers you listed require computer expertise?

Computer User

- Many people are computer “users”.
- They:
 - Are proficient with "popular" software products (Internet Explorer, MS Office, Email Apps.)
 - Don't really understand how computers work.
 - Basically just push the buttons.
 - Cannot create their own hardware and/or software solutions to problems.

Computer Expertise

- World needs people with computer expertise.
- People who:
 - Know how computers work.
 - Understand Computer Hardware
 - Understand Operating Systems & Networks.
 - Understand Programming Languages.
 - Are capable of creating software and hardware solutions to problems.

Industries Need Computer Experts

- **Medicine:**
 - MRI, Genetic Engineering, Drug Development.
 - Expert Systems (Sapphire).
- **Military/Law Enforcement/Rescue Services:**
 - Robotics
 - GPS/GIS
- **Energy:**
 - Simulation programs.
 - Alternative Energy (Smart Grids).
- **Finance/Law:**
 - Expert Systems.
 - Cryptography.

Careers in Computing (I)

- Technology careers are among the best paying and the most in-demand careers in the world.
 - Computer Engineer:
 - Think of your favorite "tech gadget". You can thank computer engineers for creating it.
 - Software Engineer/Developer:
 - Every operating system, office application, interactive website and computer game was created by software engineers.

Careers in Computing (2)

- Information, Database and Network Managers:
 - Every career, occupation or industry that uses computers requires people with these skills.
- Computer Scientist:
 - Computer Scientists devise new ways to use computers and develop effective ways to solve computing problems.

50 Best Paying Careers (Forbes 2009)

- Computer Science
 - 18 Computer and Information Systems Managers \$53.95 \$112,200
 - 30 Computer and Information Scientists, Research \$47.10 \$98,000
 - 31 Computer Hardware Engineers \$46.83 \$97,400
 - 39 Computer Software Engineer, OS \$44.44 \$92,400
 - 50 Computer Software Engineers, Applications \$41.07 \$85,400
- Computer Expertise Required for almost all top 50.
 - 09 Chief Executives \$76.23 \$158,600
 - 29 Financial Managers \$47.76 \$99,300
 - 33 Nuclear Engineers \$46.68 \$97,100
 - 36 Mathematicians \$45.75 \$95,200
 - 38 Aerospace Engineers \$44.48 \$92,500
- Only other field that is comparable to computer science as far as high-paying jobs is the medical field.

The Bridges Program (I)

- There is a shortage of scientists and engineers in this country.
- The world has a lot of problems that will not be solved without scientists and engineers:
 - Cancer, Aids, H1N1
 - Global Warming, Energy Shortages
 - Food and Water Shortages

The Bridges Program (2)

- Scientists and engineers **NEED** computers, and they **NEED** people who can build hardware and software solutions to problems.
- The Bridges program is about providing the world with those people.

What we want for you.

- Our goals:
- Put you on the path to becoming computer experts.
- Introduce you too the vast array of computer technology fields available to you.



The End