Why Major in Computer Science?

Information from:
- http://computingcareers.acm.org/
- homes.cs.washington.edu/~magda/freshman2006.ppt
- www.computermajors.com/it-articles/computer-science-salary-averages.a
- money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs
- www.cs.fsu.edu/prospective/cs_career_stats.php
CHOOSE YOUR COLLEGE MAJOR
What skills do you need?

What would you do?

- I have a bag of candy to give away
- Put your name and vote on piece of paper.
- If everyone in the class says “share”, the candy is split equally.
- If only one person says “I want it”, he/she gets the candy to himself.
- If more than one person says “I want it”, I keep the candy.

What is the best strategy? What will people do? Computer scientists are problem solvers and create programs to react to real people.
Is computer science right for you?

• Do you enjoy problem solving?
• Are you good with technology?
• Are you curious?
• Do you love to figure things out on your own?
• Do you want to learn to develop a cell phone app?
• Would you like to learn to make social media better?
• Do you like science and math?
• Are you creative?
• Do you like to build things?
• Do you want to help others?
• Are you concerned about the environment?
<table>
<thead>
<tr>
<th>Rank</th>
<th>Job Title</th>
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<tbody>
<tr>
<td>1</td>
<td>Software Developer</td>
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<tr>
<td>2</td>
<td>Computer Systems Analyst</td>
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<tr>
<td>3</td>
<td>Dentist</td>
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<td>4</td>
<td>Nurse Practitioner</td>
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<td>5</td>
<td>Pharmacist</td>
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<td>6</td>
<td>Registered Nurse</td>
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<td>7</td>
<td>Physical Therapist</td>
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<td>8</td>
<td>Physician</td>
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<td>9</td>
<td>Web Developer</td>
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<tr>
<td>10</td>
<td>Dental Hygienist</td>
</tr>
</tbody>
</table>
Engineering Impacts All Aspects of Society...
Take Your Pick!

- Engineering departments at USU
  - Biological Engineering
  - Civil and environmental engineering
  - Computer science
  - Electrical and computer engineering
  - Engineering Education
  - Mechanical and Aerospace Engineering
Why computer science?

- Impact
  - Advances in computing drive advances in all other fields
  - Advances in computing power the economy
    - Not just through the growth of the computing industry – through growth throughout the economy
  - Advances in computing change the way we live, the way we work, the way we learn, the way we communicate
  - Unbelievably exciting intellectual opportunities
“… the software industry is going to make more breakthroughs in these next 10 years than it's made in the last 30 … software is really going to transform not just what we think about as the computer industry, but the way that everything is done …” Bill Gates
Intellectual opportunity

Wreckless driving

Sensor based environment monitoring

A teacher for every learner

Prosthetics / augmentation / access

Personalized Health care

Computing, innovation, and creativity
Intellectual opportunity

Computational biology and medicine

The end of business travel: hangouts/skype

A personal index for books, records, communication: memex

Transforming the nation’s defense

Social media
Computing is in high demand

Percentage Of New STEM Jobs By Area Through 2018

- Computing: 71%
- Software Engineering: 27%
- Computer Networking: 21%
- Systems Analysis: 10%
- Database Admin.: 2%
- Computer Support: 7%
- Other Computing: 3%
- Life Sciences: 4%
- Mathematics: 2%
- Traditional Engineering: 16%
- Physical Sciences: 7%

Virtually 100% of all CS graduates find jobs in their majors. In other fields, job placement may be more like 30%.

Degree Production vs. Job Openings

Sources: http://cs.stanford.edu/~erober/2004/SIGCSE04/RediscoveringThePassion.ppt
Salaries are high

- Graduates earning degrees in humanities and social sciences are at $37,058
- National Association of Colleges and Employers (NACE) Salary Survey shows that the average salary offer to a 2013 bachelor's degree candidate is $44,928
- The average offer to computer-science majors is $60,000.
Top 10 Reasons to Major in Computing

1. Computing is part of everything we do!
2. Expertise in computing enables you to solve complex, challenging problems.
3. Computing enables you to make an impact in the world.
5. Computing jobs are here to stay.
6. Expertise in computing helps you even if your primary career choice is something else.
7. Computing offers great opportunities for true creativity.
8. Computing has space for both collaborative work and individual effort.
9. Computing is an essential part of well-rounded academic preparation.
10. It is fun!
Satisfaction
Computer Science is a Welcoming Career

- Most work is team work
  - You get to work with people every day
  - The people you work with are really great people
  - You can also work with customers, lawyers, etc.
- In computer science and engineering
  - Most jobs offer flexible schedules
    - You may never have to wake up early in the morning
    - You may never have to dress up
    - You can work from home, earn top dollar, and be productive
Engineering Opens Many Doors

- Engineers learn highly portable skills
  - Solve problems, build systems, understand principles
  - Learn how to learn
- Many different types of jobs
- Can change your type of work throughout life!
- Can couple CS with business or domain expertise
- Especially in Computer Science
  - Amazing number of different opportunities
  - You get to shop around! You should shop around!
- Engineering is an international profession
  - Working abroad easier than for other professions