



EGS 1006 -CISE

Computer & Information Science & Engineering
Stay a while...



Who we are...

- 12 NSF Career Awards
- 4 IEEE Fellows
- 2 European Academy of Science
- 2 Fulbright Scholars
- ACM Distinguished Scientist
- Numerous other awardees



Who I am:

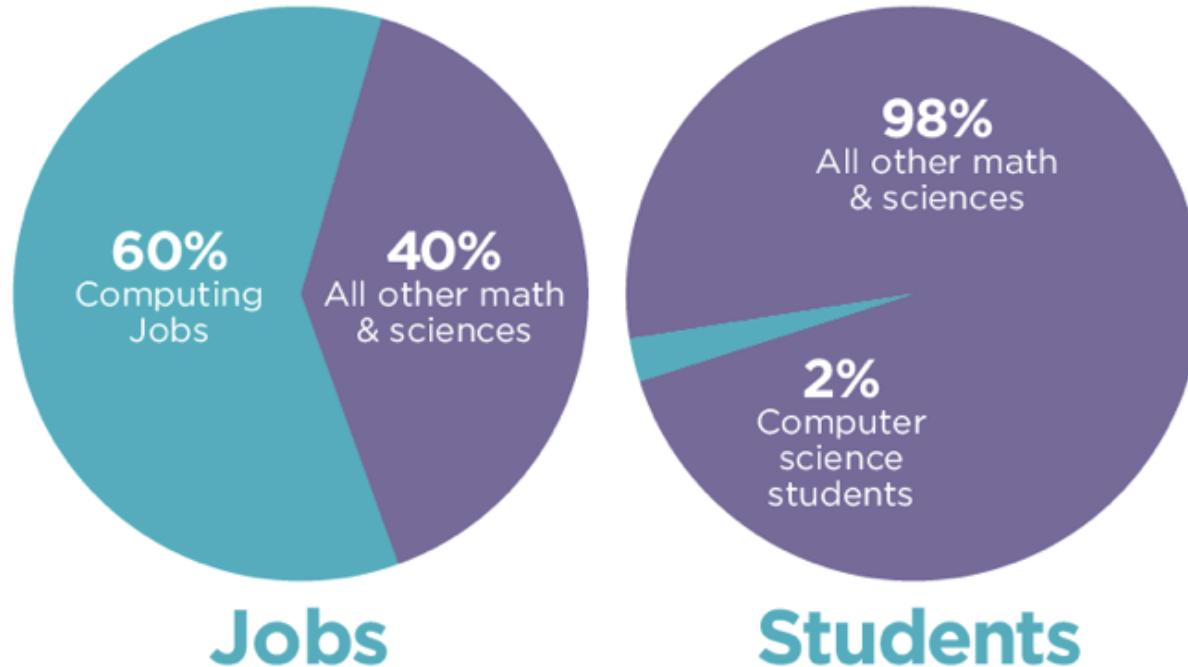
- Ph.D. - 3D Audio, VR, HCI
- US Army Veteran
 - multiple service medals
 - USUHS Medical School
- UF - Biology major
- Surfer and swimmer
 - Grew up in Jax Beach



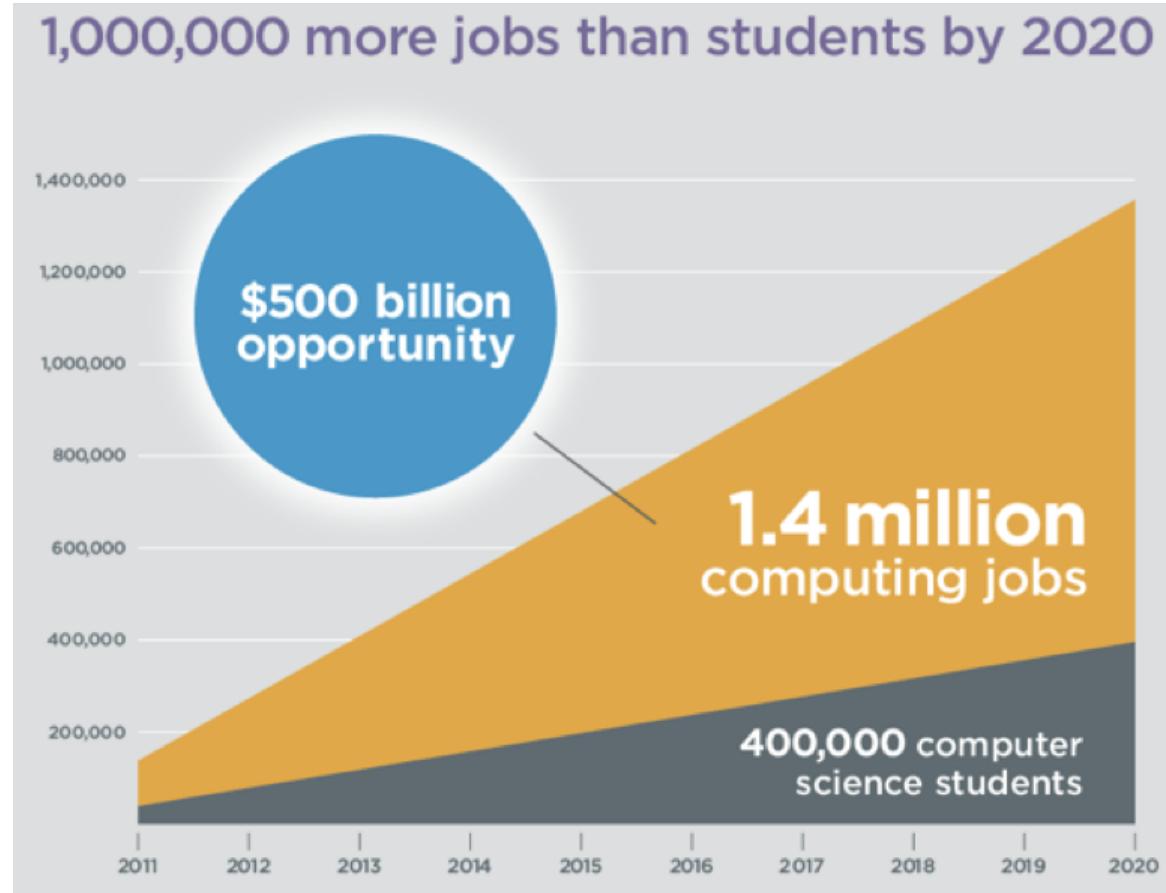


You are needed:

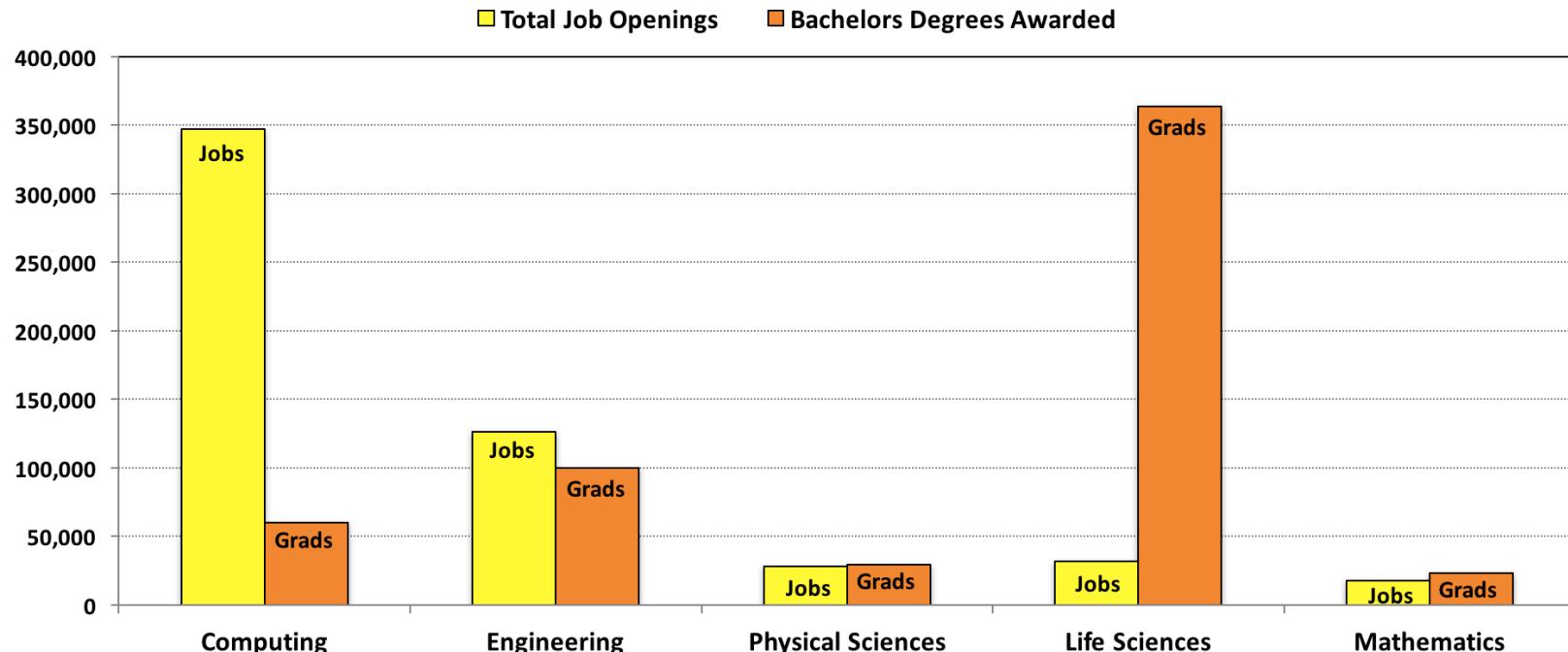
The job/student gap in computer science



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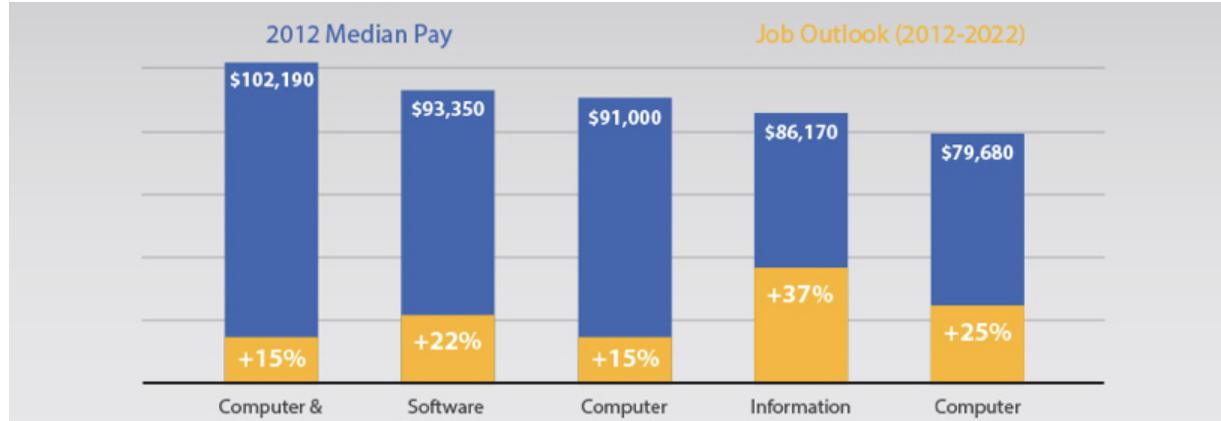


US-BLS Avg Annual STEM Openings Thru 2026 vs Recent College Graduates



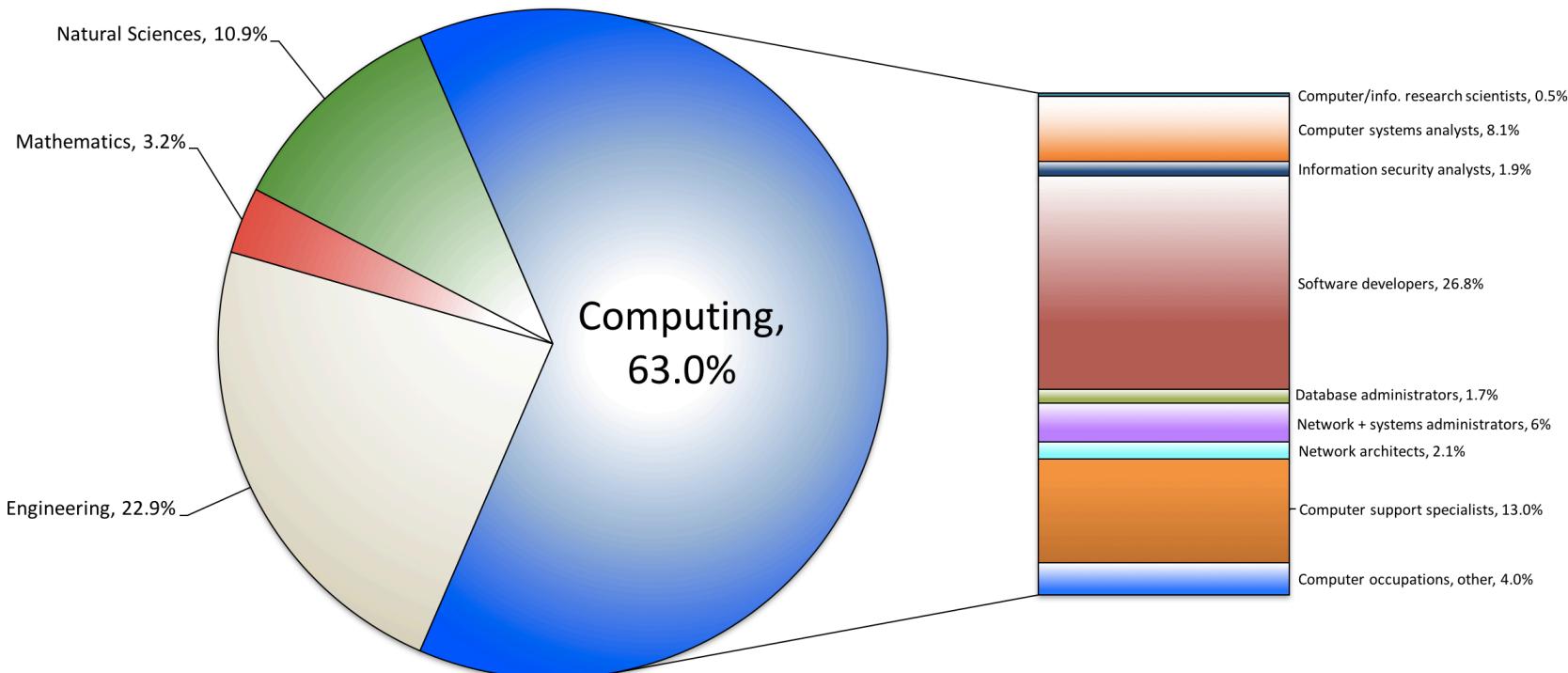
Data Sources: US-BLS Employment Projections (www.bls.gov/emp/ep_table_102.htm)
National Science Foundation NCSES (<https://ncsesdata.nsf.gov/webcaspar/>, 2015)

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Computer science is a
top-paying college degree
and computer programming
**jobs are growing at 2X the
national average.**

US-BLS Avg Annual STEM Job Openings Thru 2026 As Percentage



Top 10 Job Titles

- Software Engineer
- Systems Engineer
- Android Developer
- Java Developer
- Business Analyst
- .NET Developer
- Web Developer
- Systems Admin
- Project Manager
- Network Engineer

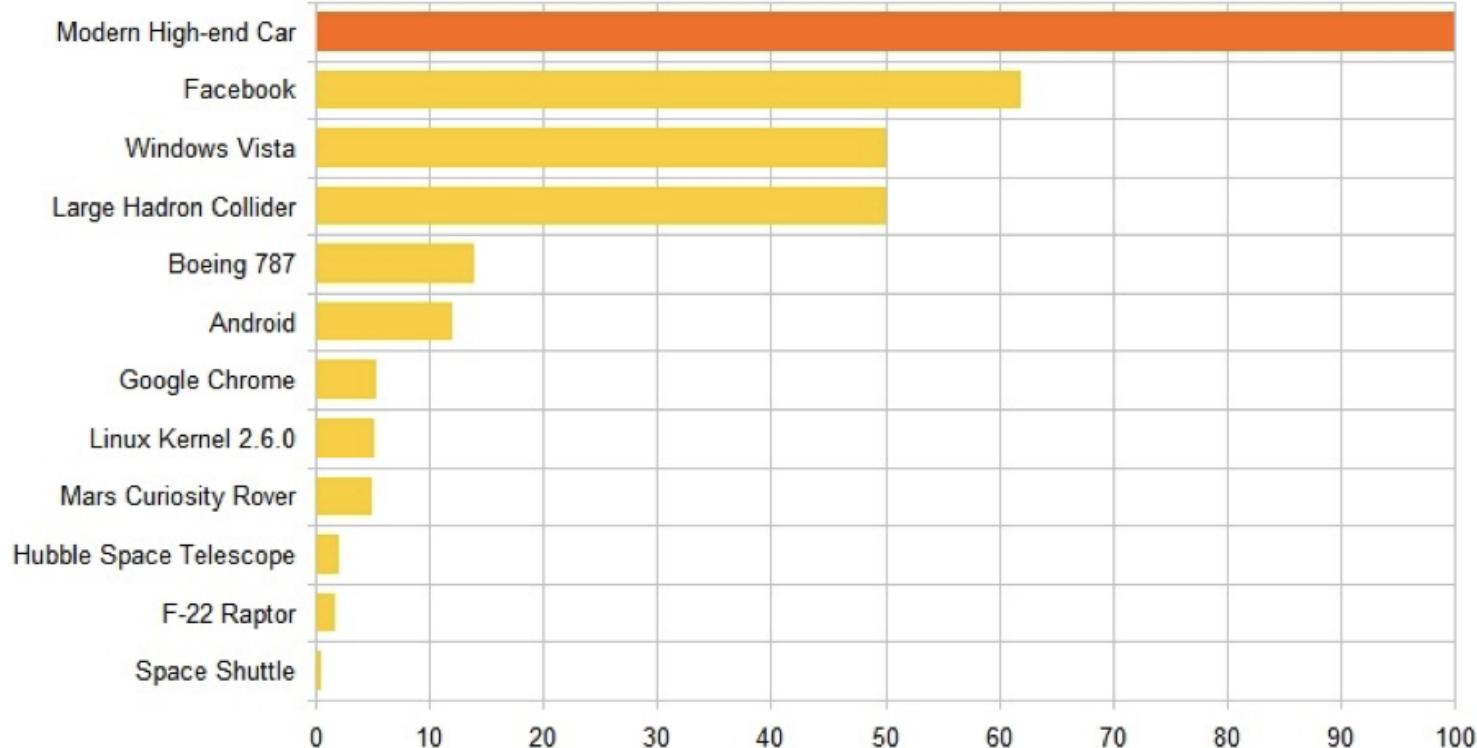
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Want other reasons to join?

Freedom at Work

- Work in any field
- CS is...
 - a relatively new field
 - growing fast
- New field = New ideas
- not just in CS but in all disciplines



Software Size (million Lines of Code)

Freedom of Thought

- Have an idea?
 - No venture capital needed
- Startups today are largely tech-based
- Open source
 - tools you can use for free
 - improve the community



Freedom in General

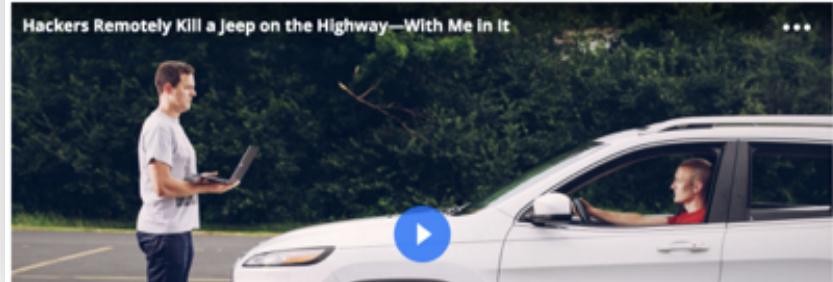
- One of the least stressful professions
 - 7 out of 30 top jobs are in CS field
- Innovative work environments



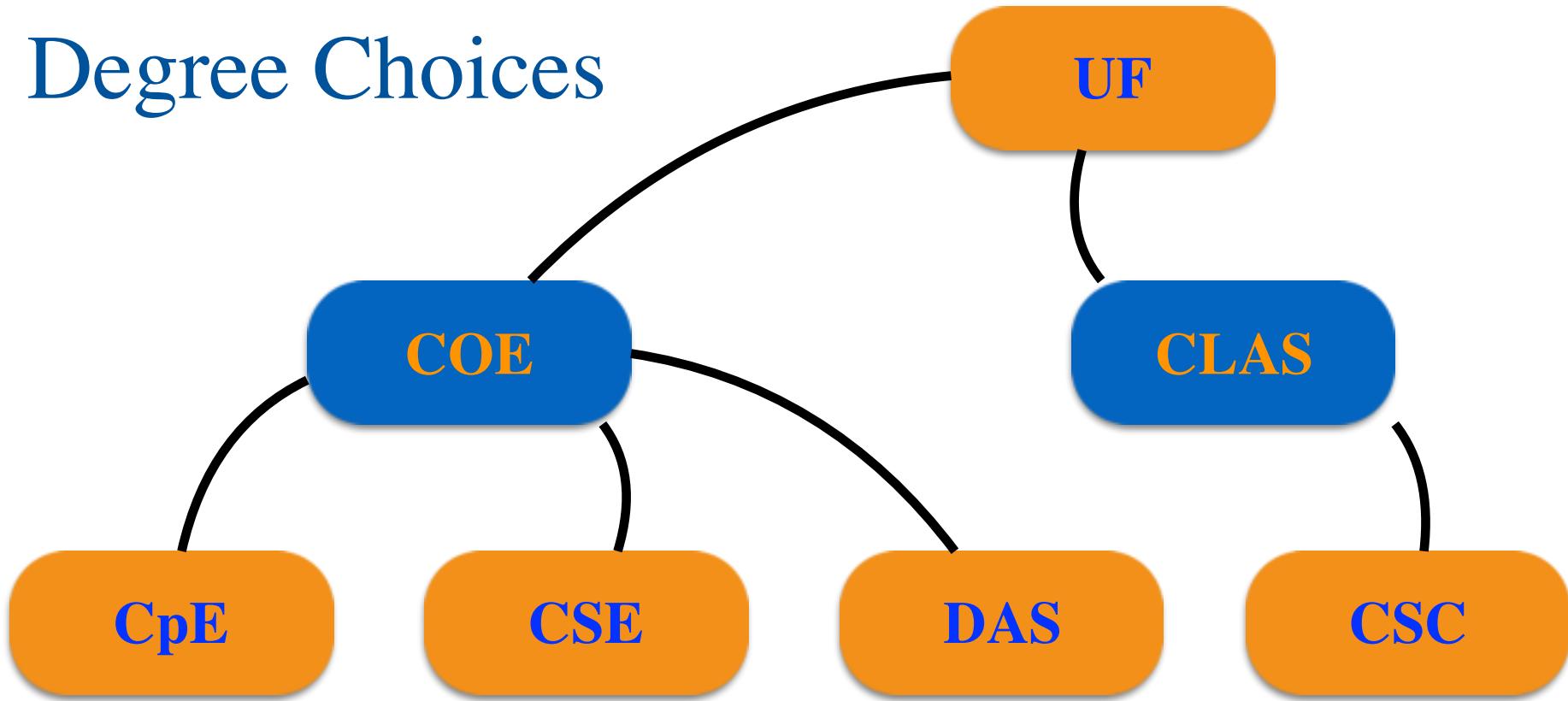
Current Events

- Gain inside knowledge on current hardware and software developments
 - NSA \ Big Data
 - Hacking
 - Jeep and VW
 - DRM
- Many other issues that will affect you!

HACKERS REMOTELY KILL A JEEP ON THE HIGHWAY—WITH ME IN IT

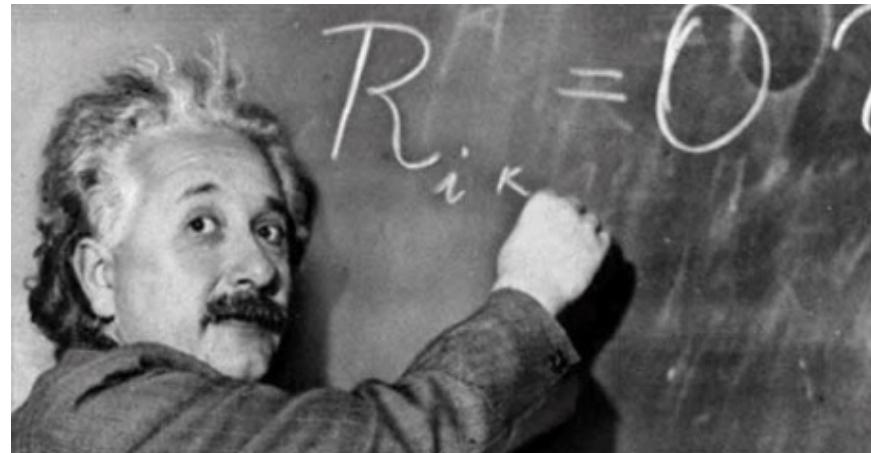


Degree Choices



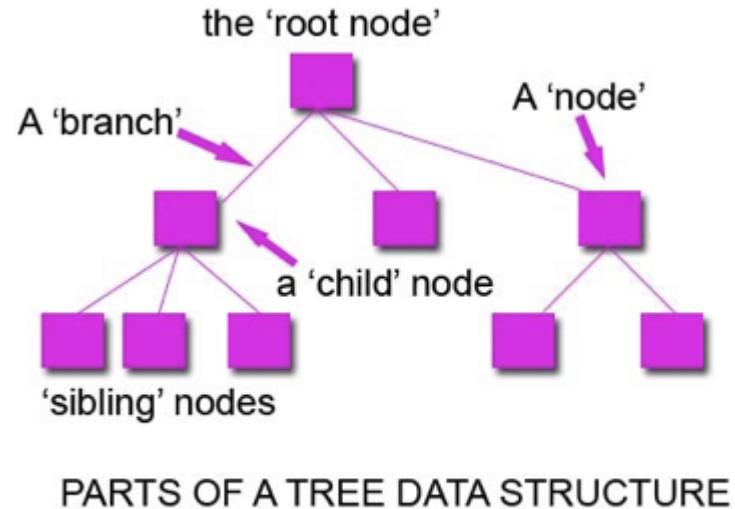
Computer Engineering (CpE)

- Background Courses
 - Math: Calc (1-3), Differential Equations, Linear Algebra
 - Don't be afraid - actually helpful later!
- Physics, Chemistry, etc.
- Engineering Cores
- Can change majors



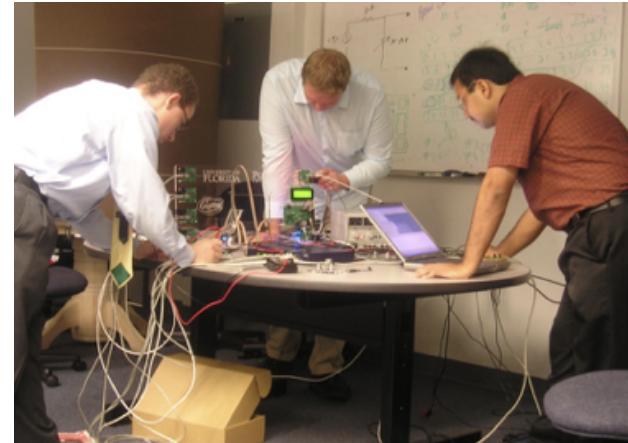
Computer Engineering (CpE)

- Major Classes
 - Programming, Discrete, Comp Org, Data Structures, Algorithms, OS, Soft Eng, Networks, Digital Logic
- Tech Electives
 - AI, Graphics, Databases, etc.
- Pursue your interest!
- ABET accredited



Computer Science (CSE)

- Same background and similar major/tech courses as CpE
- Differences with CpE
 - interdisciplinary electives outside Dept./College
 - communication classes
- Create your own Program!
- Still within COE



Computer Science (CSC)

- Same background and similar major/tech courses as CSE
- Differences with CSE/CpE
 - can take many courses from non-CS areas
 - can change your mind!
- Degree from CLAS



Digital Arts/Sci (DAS)

- Same background as CSE
- Differences
 - Art classes
 - DAS courses
 - Animation, Audio, Interface, GPUs, Gaming
 - Interdisciplinary courses



Extra Options

- Combined BS/MS
 - all programs can be combined
- CS Minor
 - Calc 2, Programming
 - Discrete, Comp Org, Data Structures, OS
 - eligible for Grad School in CE or CS



How to get started...

- COP 2800 - Intro to JAVA
- Online tutorials, open courseware
- Extracurricular
 - Programming Team
 - Hackathons
 - Software Clubs, and more!



Computer & Information Science
& Engineering

Check the Website:

www.cise.ufl.edu/~tarce/egs1006.html



Herbert Wertheim
College of Engineering
UNIVERSITY *of* FLORIDA

POWERING THE NEW ENGINEER TO TRANSFORM THE FUTURE