Mr. Speaker, Mr. Vice President, Members of Congress, my fellow Americans:

Tonight marks the eighth year that I've come here to report on the State of the Union. And for this final one, I'm going to try to make it a little shorter. (Applause.) I know some of you are antsy to get back to Iowa. (Laughter.) I've been there. I'll be shaking hands afterwards if you want some tips. (Laughter.)

And I understand that because it's an election season, expectations for what we will achieve this year are low. But, Mr. Speaker, I appreciate the constructive approach that you and the other leaders took at the end of last year to pass a budget andmake tax cuts permanent for working families. So I hope we can work together this year on some bipartisan priorities like criminal justice reform -- (applause) -- and helping people who are battling prescription drug abuse and heroin abuse. (Applause.) So, who knows, we might surprise the cynics again.

But tonight, I want to go easy on the traditional list of proposals for the year ahead. Don't worry, I've got plenty, from **helping students learn to write computer code** to personalizing medical treatments for patients….

Paragraph 3/86 from State of the Union Speech, 2016

10 Jobs With the Most Potential You Should Look For in 2015 and 2016

WORK BY MELISSA BURNS

What jobs will be trending in 2015-2016? Which occupations are going to increase in demand and are worth your investment? These are the questions you should ask if you are choosing a college or want to switch careers. This article is aimed at helping you find the answers. Here are 10 jobs that have the most potential that you should consider in the future:

1. Software application developers

Training needed: Bachelor's degree; practical experience for entry-level.

Job outlook: This is an undisputed job of the future. Software surrounds us every minute of our lives, and people who create it are never going to be out of job and will always get high salaries. The ongoing revolution in

are you in the right place?

- Marc Andreessen, B.S. 1993 – co-creator of Mosaic, and later co-founder of Netscape
- Steve Chen – co-founder of YouTube
- Larry Ellison, attended – founder of Oracle Corporation
- Parisa Tabriz, Chrome Security Manager, Google
- Jerry Sanders, B.S. 1958 – co-founder and former chief executive officer of Advanced Micro Devices
- Jeremy Stoppelman – co-founder and chief executive officer of Yelp!
- Max Levchin, B.S. 1997 – co-founder of PayPal
- Reshma Saujani, Founder, Girls Who Code
- Steve Dorner, B.S. 1983 – creator of Eudora (first email client)
- Michael Hart, B.A. 1973 – founder of Project Gutenberg
- Bruce Artwick, M.S. 1976 – creator of *Microsoft Flight Simulator*
- Thomas Siebel, B.A. 1975, M.B.A. 1983, M.S. 1985 – founder of Siebel Systems
- Chris Lattner, M.S. 2002, PhD 2005 – Apple, Inc. - Creator of Swift
- Gene Hackman, attended – Five time Academy Award-nominated actor

Bill Gates noted in a February 2004 speech that Microsoft hires more alumni of the University of Illinois than from any other university in the world.

CS125: Introduction to Computer Science

Lecture 00000001_2

Bill Chapman

"Apple is at the intersection of technology and the liberal arts, the intersection of technology and the humanities." - *Steve Jobs*

What is computer science?

1) Science of computing machines
2) Mathematics and logic
3) Way of thinking, algorithmically
   solving problems
4) Structured design/engineering
5) Diverse
6) Communication between machine and man

about CS125

The science

The course

About you: life of a CS125 student

course themes

Machine Architecture

Procedural Programming

OO Programming

Software Engineering Principles

Recursion

Advanced topics and principles

BTW: proficiency exam sign-up links @ course website

Machine Architecture

Procedural Programming

OO Programming

Software Engineering Principles

Recursion

Searching, sorting, algorithm analysis

course applications

find paths through mazes

scientific visualization

sorting and search data

solve puzzles

contacts app for friends

chase routine for Pacman ghost

create randomized love letters

search movie script

determine efficiency of algorithms

encrypt/decrypt messages

modify (filters) images

computer generated song

1
2
3

weekly activities

- pre-MWF: Reading & Turing's Craft exercises
- MWF: Lectures
- Weekly: Lab/Discussion Sections
- Most weeks: Quizzes - short assessments - start 3rd week
- Programming machine problems ("MPs")
- Newsgroup & Community
- + “Honors” and “Debug Your Brain” (starts next week)

grading

Guaranteed

90: A-

80: B-

65: C-

45% Quizzes (~11, weekly)

15% Machine Problems

5% Lecture participation

5% Section achievement points

5% Turing's Craft exercises

25% Final Exam

To pass, must *attempt* all MPs and other required items

how to succeed in CS 125

Read all the readings / Turings craft example

Attend and participate in all lectures and labs

Spend time and effort on MPs

Communicate/engage with your CS community

you

Readings, Turings Craft, Lecture, Lab attendance are required.

Be part of the Community.
Expect to help each other.

Ask for help when you're confused or stuck!
Public Qs : **Piazza**
Private Qs : **Piazza (private messages)**

Lectures and Labs will require brain power.

us: the course staff

1) CS 125 Illinoisan Doyens:

2) Teaching Assistants:

3) Caitlyn Holmes:

4) Bill Chapman:

Help from any of these: Use Piazza! or office hours

what now?

Course website:

URL: http://courses.engr.illinois.edu/cs125

Read Course Policy

Read Course Notes #1 & #2

before next Lecture (links on Lecture page)

Bring your laptop to your AY_ section

(you will be setting up your coding environment)

java

eclipse

svn

Honors Section CS 196-25?

3hr Proficiency Exam (see CS125 home page)

just registered today, or are planning on registering in the future?

email: wlchapma@illinois.edu with your netID

a little java

```
System.out.println(“This message will appear”);
```