Welcome to CSE 150!

“I've always considered the most boring 20 minutes of the semester the time I spend reading the syllabus on the first day of class.

Students come in, potentially excited about getting started, only to end up listening to me read aloud.

I imagine them paraphrasing in their heads one of my favorite Woody Allen lines: Thanks, but I've been doing my own reading since about the first grade.”

http://chronicle.com/weekly/v53/i02/02c00201.htm

Who uses probabilistic methods in AI and ML?

- Google - pattern matching
- Amazon - customer profiling
- Microsoft - multimedia OS
- Wall Street - time series prediction
- Game makers - enemy AI
- FBI - forensic speaker ID

Prerequisites

- Programming
  - Homeworks will involve coding.
  - Also: basic data analysis and visualization.
  - Solutions accepted in any language!
  - Java, C/C++, MATLAB, Perl, Python, etc.
  - No hand-holding with compiling, debugging.

Non-CS majors are welcome.
Prerequisites

• Elementary probability
  – Random variables
  – Expected values
• Calculus
  – Computing derivatives
  – Computing maxima and minima
• Linear algebra
  – Matrix multiplication, inverses
  – Solving systems of linear equations

Readings versus lectures

• Readings
  – No truly required texts.
  – Some handouts in class.
• Lectures
  – Designed to be self-contained.
  – Important for homework assignments.
  – Emphasis on mathematical development.
  – Blackboard, not powerpoint!

Homework

• Academic dishonesty
  – OK to use published and online texts.
  – Not OK to plagiarize from other students.
  – Cheating will be severely punished.
• Rules of the game
  – One extension: no questions asked.
  – Other late assignments: half credit.
  – Working in groups is allowed.
  – Write (but do not type) up your own solutions.

Medical diagnosis
(http://www.norsys.com/net_library.htm)