

CS305 - Social, Ethical, and Legal Implications of Computing

- Spring 2011 -

Bart Massey (bart@cs.pdx.edu)

Warren Harrison

(warren@cs.pdx.edu)

Course Goals

- Identify the ethical issues that relate to computing in real situations you may encounter.
- Decide whether a given action is ethical within the context of professional computing ethics, and justify that decision.
- Look up relevant ethical standards developed by the ACM.
- Prepare and deliver a short professional-quality talk on a topic relating to ethical, legal, and social implications of computing.
- Research and write a professional-quality paper about a topic relating to social, legal, and ethical implications of computing.
- Recognize situations in which there may be computing-related legal issues and know some legal principles to apply.
- State several important impacts of computing on society.
- State several examples of important ethical principles as they apply to computing related situations.

Syllabus

Time and Location. Mondays, 12:00-13:50 in FAB 40-06

Moodle. <http://svcs.cs.pdx.edu/moodle/cs305>

Text. Ethics for the Information Age (4th ed.), Michael Quinn, Pearson, 2009. ISBN 0-13-213387-3.

Grading Policies. Grades will be based on homework (20%), attendance/participation (10%), preliminary slides & abstract (10%), your presentation (20%), your evaluation of others' presentations (10%), your paper (20%) and the final exam (10%). ***In order to pass this class, you must receive at least 50% of the points in each category.***

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Computing and Society

How has computing and digital technology affected society?

Computing and Society

How has computing and digital technology affected society?
Digital technology allows us to store, organize and retrieve massive amounts of data

How Did We Get Here?

Storing, Organizing and Retrieving Massive Amounts of Data

Storing Data

Wax Tablets [2000BC] – auxiliary storage

Codex [200s] – from scrolls to books

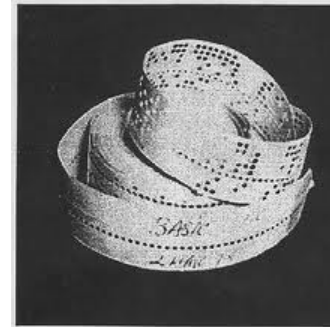
The Printing Press [1450s] – write once, produce many



How Did We Get Here?

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Paper Tape [1870s]



Punched Cards [1890s] – Herman Hollarith

Magnetic Storage [1920s] - audio



How Did We Get Here?

Storing, Organizing and Retrieving Massive Amounts of Data

Magnetic Data Tape [1951] - ~10M on a 2400' reel

Hard Disk [1956] – 5M @ \$35K/year –
RANDOM ACCESS!



How Did We Get Here?

Storing, Organizing and Retrieving Massive Amounts of Data

Acquiring Data

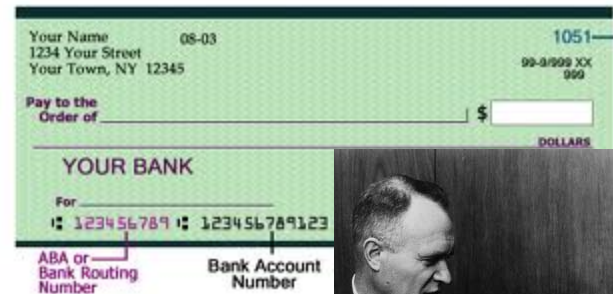
Keyboarding [1920s] – IBM card punch



Optical Character Recognition [1950s]

Speech Recognition [1961]

Barcodes [1974]



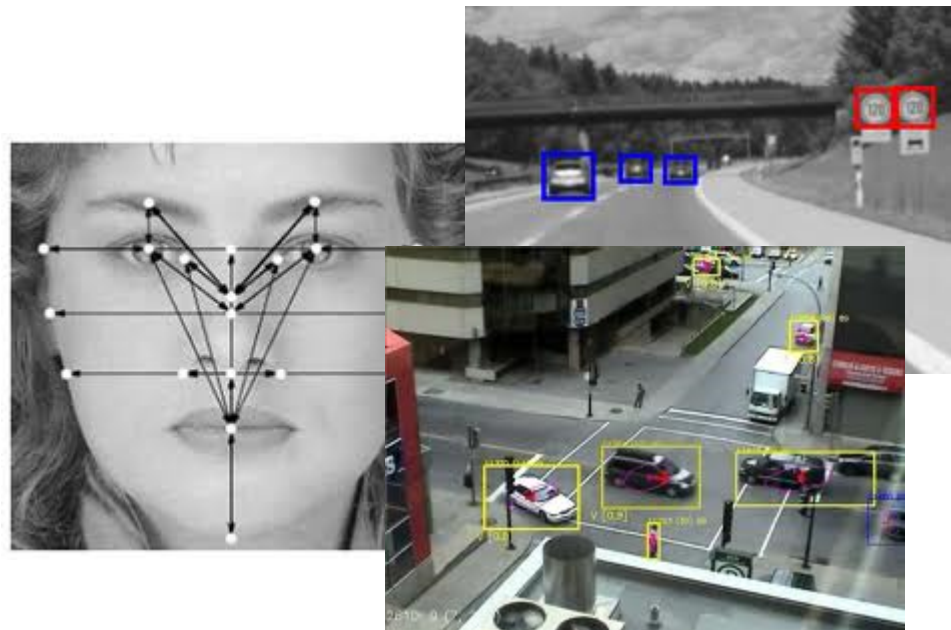
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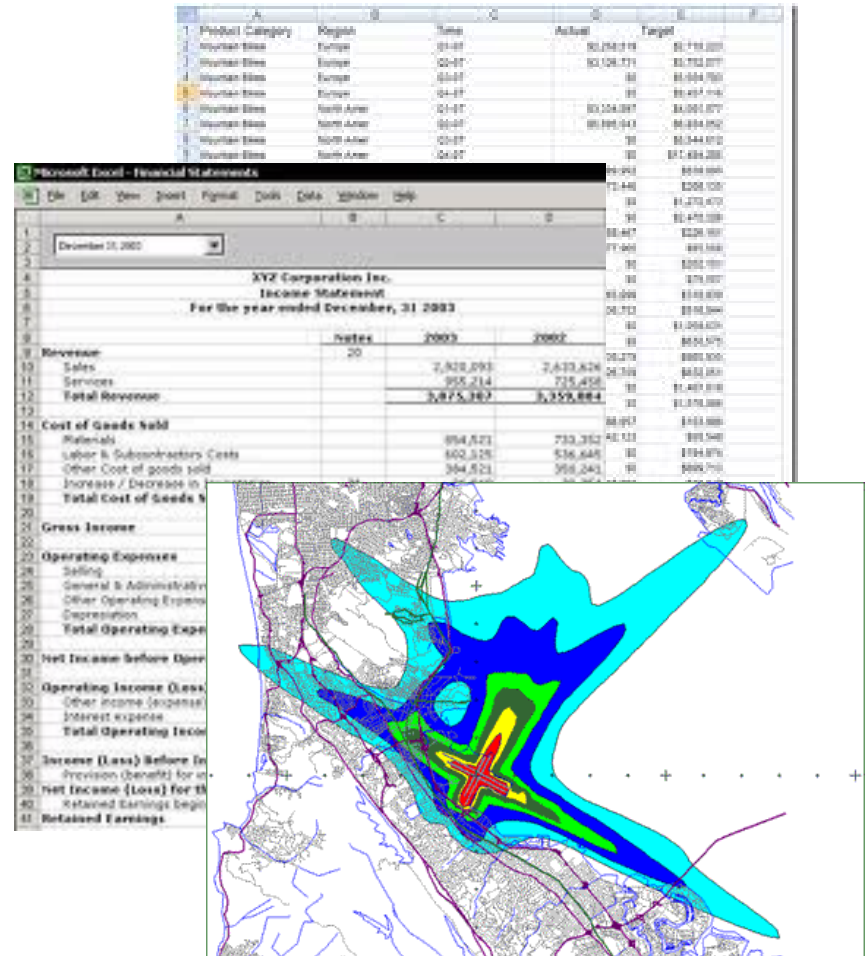
Storing, Organizing and Retrieving Massive Amounts of Data

Processing Data
Tabular summaries

Computations

Models

Predictions



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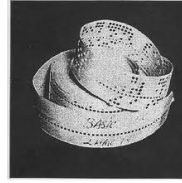


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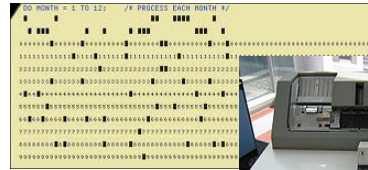
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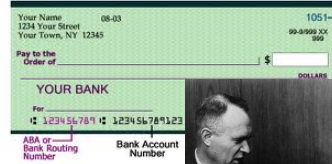
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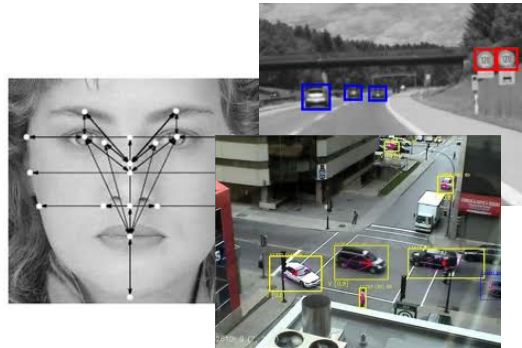


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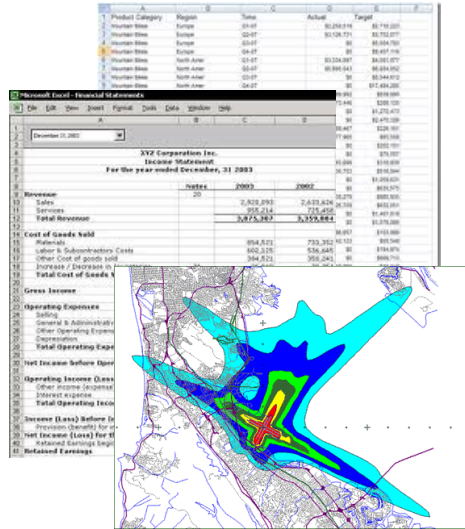
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