Four main threads in the program

- Ethical and social issues in computing
- CS Application areas:
  - artificial intelligence (natural language processing, information retrieval, machine learning)
- IS Application areas:
  - information architecture
  - human-computer interaction
- Computer programming

What does an “information architect” do?

Information architecture

- Construction of a structure or the organization of information
- In a library: combination of the catalog system and the physical layout that holds the books
- On the web: combination of organizing a site’s content into categories and creating an interface to support those categories
- For a database: designing the categories and the relationships among them; designing an interface for effective query and maintenance

What are the tasks involved in creating a website?

Information architecture draws from many fields

- Library science
- Human-computer interaction
- Computer science
- Media and communication science
- Psychology
- Organizational behavior

Information architecture

- Has origin in library science
- Early
  - need for organizing printed material
- Now
  - both printed and digital material
  - Large quantity of material
  - Frequent update to collection
  - Highly domain specific
    - E.g., university library system vs. the information system of a business corporation
Five main types of Web sites

- E-commerce
  - Main goal is transactional
- Informational
  - Provide info about a company, organization, group, hobby, activity
- Entertainment
  - Often subscription based
- Community
  - Often includes computer-mediated communication tools, such as list servers, newsgroup, chat rooms, etc.
- Intranet
  - E.g., an organization’s internal networked documents

User-centered web development

1. Define mission and target user population
2. Collect user requirements
3. Create and modify conceptual design
4. Create and modify physical design
5. Perform usability testing
6. Implement and market website
7. Evaluate and improve website

Focus on web design & evaluation

- Organizational & structural systems
  - What are the different ways in which digital content can be organized?
  - What kind of structural arrangements facilitate access and use?
- Navigation and labeling systems
  - What are the relationships among the chunks or containers

Site hierarchy

Navigation

- Dictionary:
  - Getting from one place to another
  - Figuring out where you are
- Website:
  - Where have I been?
  - Where I am?
  - Where can I go?
Four common navigational schemes (on a homepage)

- **Topical navigation**
  - www.kids.yahoo.com
- **Audience-splitting navigation**
  - Organize by who will use the information
  - http://www.engineering.cornell.edu/
- **Metaphor navigation**
- **Organizational structure navigation**
  - Usually for intranet

Sitemaps
- Not technically a navigational scheme

Navigation: basic elements

- **Site ID**
- **Sections (and subsections)**
- **Utilities**
- **“You are here” indicator**
- **Page name**
- **Local navigation**

Persistent navigation

- Navigation elements that appear on every page (except the home page and forms)
- **Five important elements:**
  - **Side ID**
  - A way home
  - A way to search
  - Utilities
  - Sections

Navigation: accessories

- **Breadcrumbs**
  - http://www.about.com
- **Tabs**

Having arrived at a well designed page, you should be able to answer these questions almost immediately:

- What site is this?
- What page am I on?
- What are the major sections of this site?
- What are my options at this level?
- Where am I in the scheme of things?
- How can I search?

The Home page has to accommodate many things...

- Site identity and mission
- Site hierarchy
- Search
- “Teases”—promos
- Timely content
- Deals
- Shortcuts
- Registration
- Show me what I’m looking for
- … and what I’m not looking for
- Show me where to start
- Establish credibility and trust
The message of the Home page

- Tag line
  - http://www.alibris.com/
  - http://www.refdesk.com/
  - http://www.netmarket.com/

- Welcome blurb

- Where do I start?
  - Where to start if I want to search
  - Where to start if I want to browse
  - Where to start if I want to sample the best stuff