My PhD Experience

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My PhD Experience...

Middle East

Iran

My PhD Experience…

Sharif University of Technology
Bachelor's of Science in Computer Engineering

My PhD Experience…

Software engineer @ a software company ☹
E-business systems for dialogues between peers

California State University, East Bay
Master of Science in Computer Science

Artificial Intelligence

Machine Learning

User modeling

Student Modeling

Intelligent agents

Intelligent Tutoring Systems

Neural Networks

Cognitive Modeling

Social Psychology

Women and minorities in
Computer Science

Recommender Systems

Information overload

Peer support

Social Navigation

Social Navigation?

"*without knowing much, we joined the longest existing queue formed for a sushi restaurant. looking at faces of people (both young and old) filled with expectations despite the long wait in the cold weather, we were sure that the food would be worth every minute of waiting time. well, it was.*"

Younghee Jung- http://www.flickr.com/people/younghee/

Master's Thesis Project

Study problem of under representation of female and minority students in computer science

How online learning can improve the situation?

How social navigation can enrich online educational information systems?

Continue on "Social Navigation"

Does it work?

Always?

For everyone?
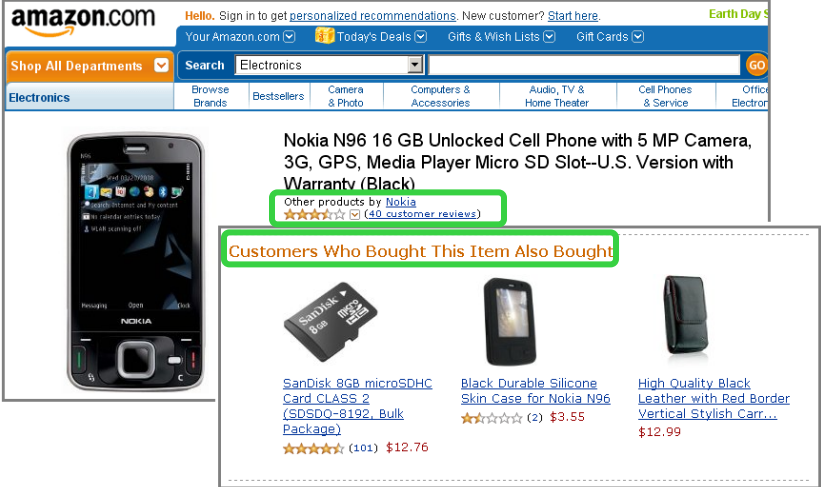
Building applications to study social navigation

Classroom studies

Lab experiments

Social Navigation Support

Visualizing individual or aggregated actions

Helping to filter out irrelevant information

Helping to decide where to go next

Letting users reshapes the information environment
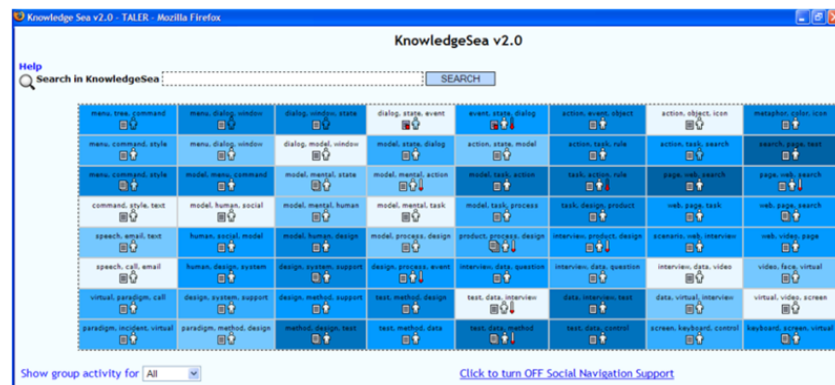
Adding social texture

Adding social affordance

Knowledge Sea

Helping students find relevant educational information among hundreds of online tutorial pages

Social Navigation Support based on past students' interaction with the system

Students visit pages with social navigation cues significantly more

Course Agent

Community based course recommendation

Cumulative "community" ratings

Automating word-of-mouth process

Under Contribution Problem

All good

but IF users provide feedback

Challenge: eliciting users feedback

– Implicit user behavior

- Clicks, time spent

– Motivating contribution

- Emphasize community benefits
- Set goals for the user
- Provide additional self benefit
- Reward actions
- Enhance user's reputation

Encouraging Contribution

Reward and Reputation based incentive for encouraging contribution for IBM social network site, "Beehive"

Rewards

No reward for adding connections
+5 points for each photo
+10 points for each list
+15 points for each comment
+100 points for first profile item

Status	Number of Points
new bee	<110
worker bee	<500
busy bee	<2000
super bee	>=2000

Result

Employees were motivated

- Significant increase in contribution
- Increase in contributions to the site inspired other users to participate more

Problems

- Gaming
- Discourage some users

Dissertation Study

When does social navigation works the best?

Controlled experiment

- Observation, Eye tracking, Log analysis

Comparing

- Performing tasks under time pressure or not
- Gender differences
- Interpersonal trust differences

Result

A significant effect of time pressure

Significant effect of interpersonal trust

No significant gender differences

Carnegie Mellon University

Postdoctoral in Human Computer Interaction Institute

Current Research

Studying user behavior in online communities and challenges of online communities

Applying social psychology theories

> Understanding the theories

> Understanding the differences of online communities versus traditional communities

What is PhD all About?

- Exploring
- Learning to do research
- Learning to be creative and analytical
- Asking a lot of questions and trying to come up with approaches to tackle the questions
- Being frustrated
- Being happy
- Being proud

Picking advisor

- Talk to ALL relevant faculty
- Try to do a project with the most relevant faculty early on (even a very small project)
- Research and personality (working style) match

Explore

- Take courses from various areas
- Attend seminars, and talks
- Read a lot of papers
  - Take notes (You won't remember)
  - And be VERY systematic (a lot of good tools)

Attend conferences

- Check for conferences in the area that are cheap to attend
- Ask your advisor if they can send you to relevant conferences
- Attend Doctoral Consortium

Take advantages of resources

- Smart people
- Access to books, journals, magazines
- Access to software

Research Methodology

- Read about different research methodologies to know which one applies to your research
- Take research design course (preferably second year)
- Pay attention to research methodologies when reading papers

Statistics

- Take several courses
- Not too early
- Connect courses with projects and research
- Pay attention to statistical analysis when reading papers

Writing and presentation skills

- Taking writing courses
- Take presentations serious and practice with friends

Talk to Other PhD Students

- You are not ALONE!
- Other students experience same problems, challenges, frustrations, excitements, …

Volunteer

- Student volunteer at conferences
- Organize academic events
  - Talks, seminars, workshops, …

Internship

- Try to do several internships during your PhD
- Research labs, university labs, industry

Read PhD Comics

CORE PRINCIPLES IN RESEARCH

OCCAM'S RAZOR

"WHEN FACED WITH TWO POSSIBLE EXPLANATIONS, THE SIMPLER OF THE TWO IS THE ONE MOST LIKELY TO BE TRUE."

OCCAM'S PROFESSOR

"WHEN FACED WITH TWO POSSIBLE WAYS OF DOING SOMETHING, THE MORE COMPLICATED ONE IS THE ONE YOUR PROFESSOR WILL MOST LIKELY ASK YOU TO DO."

WWW.PHDCOMICS.COM

Have a life!

- It will never get easier! ☺
- Take fun courses
- Get enough sleep
- Leave work for a day when you are too frustrated

Useful Resources & Tools

- CiteULike **(http://www.citeulike.org/)**
- Professional groups on social network sites such as Facebook, and LinkedIn
- Tools
  - SPSS: statistical analysis
  - WinEdt: writing papers
  - Notepad++ : a good editor
  - Very useful web portal **(http://www.sis.pitt.edu/ ~tloboda/res/prod/web-portal/)**

Questions?

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