CMSC 634
Empirical Research Methods
for Computer Science

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[634] in subject line
Course Goals

At the end of the semester, students will be able to:

1. formulate empirical research questions and answer them

2. measure HUMAN and computer performance

434 - Intro to HCI
634 - Research Methods
734 - Information Visualization

3. analyze quantitative data
③ analyze quantitative and qualitative data
Policies
Tuesday, September 01, 2009
11:15 AM

2 books

1. Doing Psychology Experiments
2. Measuring Computer Performance

recommended: statistics text

Other things you need:

1. Computer of your own
2. R statistical package
3. LaTeX

Grading

Participation: 5%
Assignments: 10%
Projects: 50%
Projects: 50%  
Final Exam: 35%
Syllabus

Tentative - will change

-I will add new papers as proceedings come out

-Bill Pugh will be giving some guest lectures on Java performance
- completed in groups of 4 or 5
  - unless special permission given, IRB approval required.

- Each project has a client.

<table>
<thead>
<tr>
<th>Client</th>
<th>Topic</th>
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<tbody>
<tr>
<td>S. Tarkan</td>
<td>Toque: Children’s Programming</td>
</tr>
<tr>
<td>M. Daly</td>
<td>Ruby and Static Typing</td>
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<tr>
<td>R. Baden</td>
<td>Trust in Social Networks</td>
</tr>
<tr>
<td>A. Bender, me</td>
<td>Malicious Content on Trusted Websites</td>
</tr>
<tr>
<td>me</td>
<td>Frequently-used language constructs in open source Ruby code</td>
</tr>
</tbody>
</table>
Every project has a
CLIENT (i.e., CUSTOMER)
not a Tutor
not a MANAGER
not someone you should
bother with incessant
amounts of email

It is your group’s job to
learn the skills needed to
do your project.
Listen to what your client
wants, then propose what
you think you can do.
First group to email me their chosen topic gets it.
Project Due Dates

Sept 17th: Proposal due
Oct 6th: WIP paper due
Oct 27th: WIP paper due
Nov 19th: WIP paper due
Dec 8th: Final Project Report due

Dec 8-10th: Project Presentations

I grade everything, although I will consult with your client.
Ruby has some unique features
- blocks
- open classes
- eval.


How often are these language features actually used in open-source Ruby code?

Man need to use RIL
May need to use RIL
(Ruby Intermediate Language)