

CMSC 396H: Honors Seminar

Neil Spring and Atif Memon

Fall 2013

Instructor Neil Spring and Atif Memon

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Class W 4:00-5:00 CSIC 2107

Office hours by appointment

Web <http://www.cs.umd.edu/class/fall2013/cmssc396h/http://scriptroute.cs.umd.edu/396h-fall13/>

1 Goals of this course

The goal of this course is to prepare undergraduate students to do research in any area of computer science, collaborating with students and faculty to: perform experiments, read and write research papers, and give presentations to an academic audience.

We plan look at good research in diverse areas of computer science so that students can both choose an area of research wisely and recognize fruitful research questions within larger projects.

The course will also cover tools and techniques for collaborative authoring and typesetting of research papers.

In sum, the goal is to convey knowledge that students tend to acquire individually through reading or tutoring by graduate students. Students at the end of the course should be ready to contribute meaningfully to active projects or even to direct their own research.

2 Format

The class will run with features of a graduate course: reading research papers and writing insightful comments before class, meeting to discuss the paper and its broader context in class, and completing a group project including a short report and presentation supervised by faculty in an area.

Early meetings of the class will be paper-focused; later in the semester will be project-focused.

We expect faculty and papers in (at least) the following areas:

Human Computer Interaction

Theory (2)

Software Testing

Programming Languages

Systems and Networking

Vision / Image understanding

3 Prerequisites

Admission to the CS Departmental Honors program, which in turn requires completion of 216 and 250 (or exemption) and a CS GPA at or above 3.5 and an overall GPA at or above 3.25.

Please try to include senior and junior students in each group; there are students without 330 or 351 who may be interested in projects that rely on languages included in 330 or theory in 351.

4 Grading

4.1 Paper Comments: 20%

The papers presented in class will be posted to the course blog at <http://scriptroute.cs.umd.edu/cmsc396h/>. On that blog, you will be expected to post an insightful comment or question about the paper to promote discussion by 9am the morning of the class. Insightful comments are not redundant with prior comments, so consider starting early, or if late, comment on comments. Good questions can point out things not made clear in the paper.

Please set aside two hours sometime in the week to read the upcoming paper. This will not be enough early in the semester, but may be about right once you're used to it.

Paper comments are generally given scores of 0, for missing or showing no evidence of having read the paper, 1, for minimal effort or a not-insightful summary, and 2, for actively insightful. When I use this approach for graduate students, it can take a couple papers of experience for students to score 2's. There is a sweet spot of comment length that approximates a paragraph: one or two sentences is too short to develop an idea, three or four paragraphs is too long to describe a coherent idea well.

4.2 Homework: 15%

There will be a few homework assignments, typically to demonstrate an understanding of general purpose tools such as latex, bibtex, git, gnuplot, ispell, and pdffimages.

4.3 Participation: 15%

You are expected to speak in every class meeting. This may sound awful to some of you, but enjoy being a student, and not being expected to know anything, while you can.

4.4 Group Project Report: 20%

You will complete a project report by the end of class. The project report will be graded by adherence to format and content guidelines from the class, including, for example, whether the introduction answers key questions about the motivation for the project, whether the results section provides and interprets a key result, whether the related work section distinguishes the current effort from prior work, etc.

4.5 Group Project Presentation: 20%

You will also present your project as a group. We expect the presentation to rotate among students and to score the presentation again using format and content guidelines including the accessibility of the presentation to the audience, organization, keeping within the time budget, legibility, etc.

4.6 Group Project Advisor Feedback: 10%

This is the content- and area-dependent section of the project grade: whether the project was performed using good practices for the area. For example, whether the proof is actually correct, the simulation is believable, and the conclusions are sound.

5 Lateness

There isn't much room for late work, though in event of medical or family emergency, send the instructors mail.

6 Administrative Cruft

6.1 Excused absences

Students claiming a excused absence must apply in writing and furnish documentary support (such as from a health care professional who treated the student) for any assertion that the absence qualifies as an excused absence. The support should explicitly indicate the dates or times the student was incapacitated due to illness. Self-documentation of illness is not itself sufficient support to excuse the absence. An instructor is not under obligation to offer a substitute assignment or to give a student a make-up assessment unless the failure to perform was due to an excused absence. An excused absence for an individual typically does not translate into an extension for team deliverables on a project.

6.2 Religious observances

Please inform me in advance of religious observances that will interfere with your ability to complete assignments on time or attend class.

6.3 Honor code

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studenthonorcouncil.umd.edu/whatis.html>.

6.4 As applied to 396H

Do not pass someone else's research as your own. It's fine to find that the problem you spent weeks working on was solved by someone else. We don't mind reproducing results in 396H, it's just republishing that would be bad. If you want to continue working on a project from another class or from prior research, please talk to us to help define the scope of the 396H-specific component, since you're not supposed to be able to claim credit for the same work twice.