Massachusetts Institute of Technology

16.412J/6.834J Intelligent Embedded Systems

Advanced Lecture Proposal, Warm-Up Completion

Team preferences due Friday, March 11th
Lecture Proposal due Wednesday, March 16th

Objective

The purpose of this exercise is for you to plan out your advanced lecture through a proposal. You will be giving your advanced lectures in teams of three (and perhaps two for some, depending on class size).

For the advanced lecture, you and your team will select a synergistic set of one to three advanced research methods. Typically the methods should have been published within the last five years. These should be methods for developing cognitive robots that perform some form of reasoning or learning within the sense/act loop. The methods should relate generally to material covered within the course. This is NOT a project or application presentation. Application is covered at the end of the semester.

Also note that your advanced lecture need not be related to your final project. This is, however, an ideal opportunity to learn the background algorithms that you will incorporate into your project.

Once you have selected a set of methods, you will then explore the relevant background material to understand these methods and their interrelationship deeply. Your team will present these methods clearly and pedagogically through an 80 minute lecture, and in the case of a three person team, will include a demonstration. An additional objective is to learn to develop an understanding of the literature in a collaborative context, through two partners (and in a few cases one partner).

Finally, you will also turn your lecture slides into a tutorial, by providing a written dialogue for each slide. This will be posted on the web, and will allow students in future years to benefit from your efforts.

During lecture on Monday you summarized the advanced topic you were interested in. In this assignment you will form your team, choose a lecture title, and select your preference for lecture times, sending this information to us by this Friday (March 11th). For next Wednesday (March 16th) you will refine this selection into a concrete team proposal for your lecture. For both parts of this assignment, each team should provide one submission.

Advanced Lecture Team Preferences due Friday, March 11th

In the next two days, please form your lecture team, select a lecture title, and decide your preference for when you would like to give your advanced lecture. No later than this Friday, please send an email to oconaill@mit.edu and Williams@mit.edu containing the following information:

Advanced Lecture Title:

Lecturer 1 – Name: email address:
Lecturer 2 – Name: email address:
Lecturer 3 – Name: email address:

Lecture preference: (indicate first, second and third choice):
First Pair (March 28, 30):
Second Pair (April 6, 11):
Third Pair (April 13, 20):

Think carefully about when you would like to present your advanced lecture. The earlier you give your lecture, the more time that you will have available to complete your project.

Advanced Lecture Proposal due Wednesday, March 16t

For the following, please submit a hardcopy of your proposal in class, or to the course secretary (Brian O' Conaill) by 5pm, outside 33-330. In addition, please email an electronic version of your submission to oconaill@mit.edu, so that we can use this to advertise your lecture on the web.

It is essential that you do the planning for your advanced lecture now, so that you will be able to present a high quality lecture starting the week after Spring vacation.

Part A

List the title of your advanced lecture, the members of your team, and provide a list of the topics covered in your lecture.

Part B

List one to three papers that you will cover in your 80 minute lecture. Please provide full references for your papers, including a url for each, whenever available.

Note that it is very difficult to effectively cover more than two algorithms within an 80 minute lecture. It is generally better to cover less, focusing on both concrete algorithms and examples.

Part C

Write a brief abstract advertising your lecture. This abstract should be no more than 150 – 200 words. The abstract should highlight the method being presented, the problem it solves, why it is important with respect to creating cognitive robots, what is innovative about the method, and where it has been applied.

Part D

Provide a list of at least four additional background references for your lecture. These references will provide the rest of the class with pointers to additional material related to your lecture. For each paper, include a full bibliographic reference, a url (if available) and a one or two sentence summary of how that paper is relevant to your lecture topic.

Part E

Summarize your plan for the division of labor between team members. When considering division of labor, remember that, in addition to presenting the lecture, you will need to annotate each of your lecture slides with a pedagogical explanation, and for three member teams, you will need to assemble a demonstration (see Part F).

Part F (For teams of three)

If you've formed a three person team, then you have the opportunity to complete this pedagogical process, by assembling a demonstration of your advanced lecture. We do not expect you to implement a demonstration of your presented algorithms from scratch; however, for many algorithms, you

can find implementations available on the web that you can use for demonstration.

In those cases where a software demonstration is not available, consider other, creative ways for demonstrating the methods that you are teaching. For example, in the past, students have used members of the class to demonstrate the simulation of multi agent algorithms and agent architectures.

For this part please describe a demonstration that you plan to provide during your advanced lecture. In addition, please provide references to any software or other materials that you will use.

Preparing and Delivering Your Lecture

Part A Dry Run ***One Week Before Your Lecture***

To ensure that your lecture is polished, we would like each lecture team to give a dry run to another lecture team. The teams for the first two lectures should give dry runs to each other, similar for lectures 3 and 4, and lectures 5 and 6. You should plan to give your dry run roughly a week before giving your advanced lecture. Please assemble your feedback at the time of the dry run.

Team Giving Feedback:

Each member of the team listening to a dry run should but together detailed written comments. In these comments please include the following:

• Describe at least three things that you found positive about the presentation.

• Describe at least three areas that you feel need to be improved.

Please be as specific, detailed and constructive as possible.

Submit a copy of each team member's comments (with name indicated) to both the team that gave the dry run, and to Brian O' Conaill.

Team Receiving Feedback:

Upon receiving comments on your dry run, write a short plan for improving your slides. Restate each area of improvement you received as feedback, and describe concrete modifications you will make to your presentation in order to address that point. Next, generate a second version of your slides that implements your plan.

Please submit a copy of your plan to Brian O'Conaill.

Part B Final Lecture Preparations ***Day Before Lecture***

Email your lecture slides electronically no later than the night before you give lecture. If you need a computer to project your talk, please make

arrangements with the course secretary Brian O' Conaill (conaill@mit.edu) no later than the day before your lecture.

Part C Evaluation of Lecture ***Day of Lecture***

Feedback is an important process of developing and evolving the lectures. Every student will be responsible for attending all lectures, and for providing feedback to each lecture team. The evaluation form and instructions are at the end of this write up. Please take into consideration these two pieces of information in assembling your lecture.

Part D Tutorial Extension To Your Lecture Slides ***Four Days After Lecture***

Please write a summary of any changes you would make to your lecture slides, based on lessons that you learned from giving the presentation and student comments.

Please revise your slides according to this summary, and augment your lecture slides with a textual explanation of each slide. If you use Powerpoint, you can do this by filling out the notes page of each slide.

Please submit the summary of your changes and the revised slides (hardcopy and electronically) to Brian O'Conaill (oconaill@mit.edu) within four days after giving your lecture. For a Monday lecture this is due Friday, for a Wednesday lecture this is due the following Monday.

ORAL PRESENTATION FEEDBACK FORM

Name: _____

Date: _____

Proposal____ Design Review____ Progress Report____ Final Report____
Other____

	Comments				
Strategy/Purpose	1	2	3	4	n / a
Strategy/Audience	1	2	3	4	n / a
Structure	1	2	3	4	n / a
Support/Evidence	1	2	3	4	n / a
Delivery/Oral	1	2	3	4	n / a
Delivery/Nonverbal	1	2	3	4	n / a
Visual Aids	1	2	3	4	n / a
Questions and Answers	1	2	3	4	n / a

Comments*:*

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1 = Problematic 2 = Some Weaknesses 3 = Competent 4 = Well Do

SCORING GUIDELINES FOR TECHNICAL PRESENTATIONS

Strategy/Purpose: Does the presentation meet its intended objective?

Well done	4	Objective of the presentation is easily identified; content supports objective
Competent	3	Objective is not immediately clear; some additional content needed to support objective
Some Weaknesses	2	Objective is difficult to determine; additional content needed to support objective
Problematic	1	Objective cannot be determined

Strategy/Audience: Does the presentation address the intended audience?

Well done	4	Content, structure, and language of presentation geared to intended audience
Competent	3	Presentation is missing some content required by audience; some language used inappropriately (e.g., unfamiliar jargon, too much jargon)
Some Weaknesses	2	Presentation is missing a substantial portion of content required by audience; uses some inappropriate or ineffective language
Problematic	1	No organization apparent; content of presentation reflects interests of speaker but not of audience; inappropriate use of language

Structure: Does the organization reflect the purpose of the presentation and the needs of the audience?

Well done	4	Appropriate use of direct/indirect structure; presentation organized according to audience's needs; relationship between ideas clear; strong introduction and conclusion
Competent	3	Structure either too direct or too indirect; organization is evident but may be undermined by weak transitions or occasional digressions; introduction or conclusion does not accomplish its intended function
Some Weaknesses	2	Direct or indirect structure used inappropriately; organization is confusing or unclear; weak introduction or conclusion
Problematic	1	No discernible organization; thoughts in random order without connections between them

Support/Evidence: Is the evidence used to support the argument concrete, relevant, credible, accurate and sufficient?

Well done	4	Argument is clearly supported by accurate evidence considered credible by the audience; sufficient detail to support the main points of the document
Competent	3	Many details support argument, but some are not fully elaborated or sufficiently specific; some evidence not relevant
Some Weaknesses	2	Some evidence is provided, but data not fully explained, relevant to the argument or credible; important pieces of evidence have not been included; some date inaccurate
Problematic	1	Little or no data to support the main ideas of the argument; much of the data is inaccurate

Delivery/Oral: How strong are the oral components of the presentation?

Well done	4	Speaker is fluent and poised; uses language comfortably and appropriately; speaks at an effective rate and volume; few fillers
Competent	3	Some degree of nervousness apparent; minor problems with language usage; speaker may speak too slowly or quickly, too loudly or softly; fillers are noticeable
Some Weaknesses	2	Speaker seems uncomfortable; several problems with language usage; speaker speaking much too slowly or quickly, too loudly or softly; fillers are noticeable
Problematic	1	Speaker is unable to deliver presentation coherently

Delivery/Nonverbal: How strong are the nonverbal components of the presentation?

Well done	4	Speaker uses gestures comfortably in line with his/her own style; eye contact is appropriate for audience; use of space appropriate for the situation
Competent	3	Speaker gesturing too much or too little; eye contact may be slightly too much or too little; speaker may be moving around a little too much or not quite enough
Some Weaknesses	2	Speaker gesturing too much or too little; using distracting gestures (e.g., playing with a ring); not enough eye contact; inappropriate use of space
Problematic	1	Nonverbal components of the presentation distract from ability of the audience to receive the message

Visual Aids: Do the visual aids reinforce the message and add to the effectiveness of the presentation?

Well done	4	Appropriate visual aids are used; visual aids serve as a complement to the speaker and the message to be delivered; designed effectively; speaker uses visual aid easily
Competent	3	Appropriate visual aids are used; a few weaknesses is design; a few difficulties with use
Some Weaknesses	2	Choice of visual aid is poor; weaknesses with design; difficulties with use
Problematic	1	Inappropriate choice of visual aid; design detracts from speaker's ability to deliver the message; inability of speaker to use visual aid

Questions and Answers: Has the speaker handled the Q&A portion of the presentation competently?

Well done	4	Speaker answers questions knowledgeably, thoroughly, and concisely; process is handled smoothly
Competent	3	Speaker has some difficulty answering questions concisely; some problems responding to some questions (e.g., hostile questions, aggressive questions)
Some Weaknesses	2	Speaker is thrown off balance by questions; has difficulty responding to some questioners
Problematic	1	Speaker is unable to answer questions; loses control of the process