Objectives
The objectives of the term paper are:
• To explore the state-of-the-art in AI
• To develop critical review, analysis, and thinking skills
• To introduce and develop technical writing skills
• To encourage independent thought and vision in AI

Motivation
The field of artificial intelligence is continually evolving. Research and development in AI has gone through several major phases in its short history. Within each phase, there have been significant contributions to concepts, techniques and applications of AI. Taken together, these contributions form a body of knowledge that fosters future research and development. Trends and directions are largely determined from the state-of-the-art. Thus, the comprehension and critical review of current literature is essential to the formulation of new ideas, techniques, and applications.

Description
Your task is to write a critical review paper on an AI topic of your interest. You can be an individual or a group of two individuals. The steps involved are:
• Selection of topic: You can choose a topic of your liking, or select one from the list provided to you. In any case, do discuss your interests and plans with me before finalizing the topic.
• Submission of an annotated bibliography: Find relevant literature on the selected topic and prepare an annotated bibliography. The referenced articles can be from a journal, magazine, or the web. Cite each article and describe its contents in at most two sentences. The bibliography should have a minimum of 8 entries.
• Submission of draft: Prepare a complete first draft of the term paper critically reviewing and analyzing the research and development in the selected topic. The paper should be about 8 to 10 double-spaced pages long, including any figures. I will review the draft and give you feedback on improvements.
• Submission of final paper: Revise the draft by incorporating my feedback and other improvements or changes. This is the final submission of the term paper.

Deadlines and Points Distribution

<table>
<thead>
<tr>
<th>Topic selection (including a meeting with me)</th>
<th>Deadline</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annotated bibliography</td>
<td>Thu, Dec. 19</td>
<td>10</td>
</tr>
<tr>
<td>Draft</td>
<td>Thu, Jan. 7</td>
<td>30</td>
</tr>
<tr>
<td>Return of review comments</td>
<td>Thu, Jan 23</td>
<td>30</td>
</tr>
<tr>
<td>Final paper</td>
<td>Tue, Feb.4</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>Tue, Feb.4</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Evaluation
The following points will be considered in the evaluation:
1. Clarity of presentation
2. Comprehension of the topic
3. Critical analysis of published work
4. Proposition of new ideas and directions
5. Complexity of the topic
6. Number of references cited

Guidelines
Topic: Any area of current significance is a valid topic. The topic should be well-defined rather than vague and general (e.g. “intelligent agents” is not a good topic, while “distributed intelligent agents for web services” is good). Valid topics can include concepts (e.g. “probabilistic approaches in AI”), algorithms and models (e.g. “clustering algorithms for data mining”), applications (e.g. ‘applications of belief nets to NLP”), trends (e.g. “the future of the semantic web”), and emerging technologies (e.g. “promise of alife”).

Articles: The articles can be from journals, conference proceedings, AI magazines, and the web. A good source is IEEE and ACM publications. Web articles must have a title and author name(s), that is, do not reference web sites but articles published on the web. Use the links provided on the course web site and Google (or your favorite search engine) to find relevant articles on the web.

Citation: Use a consistent way to cite and reference articles. For a web article, provide the URL as well. Here is an example format for citing and referencing:

Citation in body of paper

Reference at end of paper

Annotated bibliography: Write the reference (in the format given above) followed by at most two sentences describing its contents. Mention the key ideas, concepts, algorithms, etc, and results/conclusions of the reference.

Contents of the paper: The contents of the paper are flexible and dependent on the topic. However, all papers must have sections that introduce and explain the topic area, review and critically analyze articles, and present your ideas, thoughts and conclusions. Write for an audience with little knowledge in the topic area, but has a background in science (e.g. a fellow BS student; he or she should be able to comprehend your paper).