

Version Alpha Revision Report – Artificial Intelligence Knowledge Area

Feedback was solicited from specific reviewers on the alpha version; the notes below indicate how this feedback was incorporated into subsequent versions of the AI KA. This log focuses on the most major comments and issues; other minor edits were taken directly, and other edits were made independently by the AI subcommittee.

Feedback comment:

Why does AI/Fundamental Issues include elective topics

How incorporated:

Why not incorporated:

It doesn't in CS202x. This is a carryover from CS2013 for illustrative/comparison only.

Feedback comment:

Add specific discussions on collaboration into AI/Fundamental Issues.

- Collaborative AI (1. Dafoe A, Hughes E, Bachrach Y, Collins T, McKee KR, Leibo JZ, et al. Open Problems in Cooperative AI. arXiv [Internet]. 2020 Dec 15;(August 2019). Available from: <http://arxiv.org/abs/2012.08630>)
- Learning outcome: Why is collaboration an essential part of future AI systems?

How incorporated:

Why not incorporated:

Collaboration is certainly one aspect of AI, but this KU provides a broad overview of the topic. Collaboration is saved for other KUs

Feedback comment:

In AI/Applications - "to a specific problem in environmental sustainability such as land use allocation, then assessing the social/environmental/ethical implications of doing so." – I think this is a very important point to emphasize more. How can AI help humankind to solve global problems like climate change, poverty, etc. A linkage to the UN SDGs would be helpful here also. Add as a learning outcome: How can AI support the identification of innovative solutions to global problems, like climate change, poverty, and other topics covered by the UN SDGs?

How incorporated:

Why not incorporated:

CS 2023 focuses on what should be taught, and instructors are free to cover whatever applications they feel is most appropriate. The UN SDG suggestion is great, and a fantastic source for globally important problems, but would be more appropriate for a supplemental document than the main curriculum.

That suggested outcome is quite general, and learning outcome #1, which focuses on a specific application (which could certainly be one of these global problems), provides an equivalent and more specific answer.

Feedback comment:

Add Goal-Oriented Action Planning to advanced representation and reasoning

How incorporated:**Why not incorporated:**

That specific algorithm/approach would already fall under existing listed topics

Feedback comment:

Add digital twins to AI/Agents

How incorporated:**Why not incorporated:**

Digital twins could involve agents, but also goes substantially into modeling and other topics, including beyond AI. Consequently, it is more an application of these techniques than an AI topic/technique that belongs in AI/Agents.

Feedback comment: Add “inverse RL” to Advanced ML. Add satellite imagery as an application.

How incorporated:

Inverse RL added to Advanced ML.

Why not incorporated:

Satellite imagery would already be covered under vision.