

Research Diary -- A place for thinking and writing

To write is to begin to think.
To write in a special place,
a research diary,
is to honor your thoughts,
and to help them build,
one upon the other.

Your research diary is a special place for recording your thinking about artificial intelligence and the reinforcement learning approach to it. You will be expected to write in it almost every day (at least five times per week), producing about a page per day (at least 5 pages per week). Your diary may be on paper (preferably in a special book that makes you feel scholarly) or by electronic means. Begin each diary entry with the current day's date. Once each week on Friday, beginning January 25, you will submit the cumulative contents of your research diary on eclass as a pdf file. If your diary is on paper, just take photos with your phone and submit the photos after collecting them into a single file (that grows from week to week).

Each day in your diary you will face a blank page, which can be intimidating. After writing the date, you might try just recording whatever your recent thoughts have been on AI&RL. Try writing questions. Ambitious questions. What would you really like to know? Then approach them gradually, patiently, as discussed in class. Are there easier questions that you could ask as part of leading up to the ambitious question? What might an answer to the question be? What might it look like? Then use your other secret weapon: exposition! This is where you **explain** the questions. Most questions are a bit ambiguous. They could be interpreted multiple ways. Which of them are you actually interested in. Explain the questions and **define** the terms. Definitions are an example of a **flexible commitment**. When you define a term, or choose a particular interpretation of a question, you are committing to something, but only temporarily. You reserve the right to re-define later; now you use the particular definition so that you can express your ideas more succinctly and clearly. Finally, flexible commitment is part of **owning your ideas and your words**. You will choose the mapping between words and ideas, and explain that mapping to the reader, explicitly, even if (as is usually the case) the reader is just a later version of you.

Maybe there are several topics that have piqued your interest as part of your reading and the classes. Try listing all of the topics that seem like they might be worthy of further study. **List** them all. **Inspect** your list to see if it is complete, or if some items overlap or may even be totally redundant in their meaning. As part of this step you will probably want to **explain** the items to make your meaning clearer to yourself. Finally, after all is clear, take one more step and make a value judgment: **Evaluate** the items as to which you guess would be most interesting or productive to study or think about further.