

IDM Project - Offline Multi-Task RL

Supervisors:

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Agenda:

1. Introductions
2. Administrative
 - a. Weekly meetings
 - i. When works for everyone?
 1. 11-12 Thursdays
 - b. Communication
 - i. Email? Mattermost?
 1. Official announcements on email, other questions on mattermost
3. My goals and role as supervisor
 - a. Guide you through a research project in order to learn research skills like...
 - i. Building background knowledge to understand the current state of a research topic
 - ii. Think through a research problem and develop questions and hypotheses
 - iii. Designing, planning, and implementing experiments
 - iv. Analyzing results and presenting your findings
 - v. Developing new ideas and approaches
 - b. Max and I will present a research topic and broad goals, but ultimately it is your project to plan and execute as a group
 - c. I'm here to provide general guidance
 - i. I'll answer any questions (within reason)
 - ii. I'll monitor your progress, help you get unstuck when needed
 - iii. I'll review your reports and presentations and help you improve them
4. Your expectations for the course
 - a. Are there any personal goals you have for the project?
 - b. Is there anything you would like to see from me as supervisor?
 - c. Do you have any concerns about this course or project?
5. Review rubric
6. Review timeline below
7. For next week's meeting, I would like it if you...
 - a. Review the project proposal
 - i. Feel free to email me during the week with questions, or come with questions to the next meeting
 - ii. It can take a while to get a good grasp on the project
 - b. Talk with each other and start to form goals, (flexible) due dates, and plans, keeping course deadlines in mind

- c. Start doing background reading
- 8. Getting Started
 - a. Review offline RL
 - b. Understand the basics of how/why the methods mentioned in the proposal work
 - i. Read the references from the proposal on projectforum
 - c. Learn what multi-task RL is
 - i. Identify the challenges this presents for offline learning
 - ii. Think about why some of the methods we are looking into might fail in this setting

Proposed Timeline:

- Weeks 1-2:
 - Familiarizing everyone with the project
 - Background knowledge
 - Formulation of goals
 - (build research questions and hypotheses)
 - Make a rough plan
 - Deliverables in weeks 1-2:
 - Rough draft of week-by-week plan and goals
- Weeks 3-4:
 - Design and plan experiments for part one (recreation of methods on our environment)
 - Experimental setup, evaluation plan, how to present results, hypothesis on what the experiments will show
 - Determine the role/responsibilities of each group member
 - Finalize proposal and presentation
 - Deliverables in Weeks 3-4:
 - **May 7th:** Proposal Due
 - **May 8th:** Proposal Presentation
- Week 5:
 - Begin carrying out experiments for part one
 - Start thinking about what questions you want to ask and how to answer them from part two
 - Deliverables in week 6:
 - Full experiment plan for Part One
- Weeks 6-7:
 - Analyze results of experiments for part one.
 - Design and plan experiments for part two (evaluating training dataset properties)
 - Work on Midterm Presentation
 - Deliverables in week 7:
 - **June 5:** Midterm Presentation.
- Week 8:
 - Carry out experiments for part two
 - Analyze results

- Work on report
 - Deliverables in week 8:
 - **June 14:** Submit report for peer review
- Week 9:
 - Continue any experiments and analysis
 - Continue tweaking report
 - Work on peer review
 - Deliverables by week 9:
 - **June 19:** Peer review due
- Week 10:
 - Adjust report given peer review feedback and create rebuttal
 - Finish presentation
 - Deliverables in week 10:
 - **June 23:** Final report and rebuttal due
 - **June 24:** Final presentation