

## CS-6390 Project Phase 2, Spring 2021

**The Phase 2 submission for each team's IE project is due on March 25, 2021 by 11:59pm.** Please submit the following items on Canvas:

- All of the source code that your team wrote for your IE system. Please submit every file that you created, even if it simply invokes an external tool. But you do not need to submit external libraries or external tools that your IE system needs. We will not be compiling or running your IE system ourselves. The purpose of the source code submission is so that we can verify that you wrote your own code and so that we can inspect the code in case we have questions about the system's design or what it does.
- A short (roughly 2 page) report of your IE system and its performance. See details below.

In addition, each team will be required to give a live demonstration of their IE system with the TA (Tianyu Jiang). Tianyu will be sending out a sign-up sheet, so be sure to sign up for a demonstration slot. Details on the live demonstration are below.

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### Phase 2 Project Grading

The grade for Phase 2 of the IE project will be based on the following:

- The quality of your team's project report.
- The ability of your team to give a live demonstration of your IE system's performance with the TA and to answer questions about its design.
- The degree to which your team fixed the problems and addressed any issues that were raised in your Phase 1 project feedback from Prof. Riloff. *Please be sure to resolve those problems and issues!*
- The quality of your Phase 2 IE model and the degree of novelty of the Phase 2 IE model compared to the Phase 1 IE model. *For the Phase 2 submission, the expectation will be that you have either (1) implemented a brand new type of model for your IE task, or (2) made substantial changes and/or additions to your Phase 1 IE model.*
- The quality of the evaluation of your IE system. The evaluation should include an appropriate use of the data set, correct application and presentation of your evaluation metrics, and full evaluation in terms of recall and precision for each type of label that your system produces. *You should also compare the performance of your Phase 2 model with the performance of your Phase 1 model.*

NOTE: In most cases, the Phase 2 system will likely perform better than the Phase 1 system because you've gained experience with the IE task, but it is not a requirement that this be the case. For example, you may wish to try a completely different type of IE model, but it may turn out that the first type of model performed better. This is perfectly fine, so long as the models and evaluations were done sensibly and correctly. Don't be afraid to try something new just because you're not sure how well it will perform!

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## Phase 2 Live Demonstration

Each team will be required to meet with Tianyu for 15 minutes soon after the March 25 deadline to give a live (via Zoom) demonstration of their IE system. The purpose of this demonstration is (1) to show Tianyu that you have a working IE system by demonstrating your model's performance on a few examples, and (2) to answer questions that Tianyu may have about your system's design.

Tianyu will be expecting you to run your IE system on some examples. (You do not need to train your system during the demonstration, just run the trained model.) For each example, please plan to show him the input text as well as the output generated by your IE system for that specific input text. We are not looking for evaluation numbers during this demonstration (you can show them if you want, but they are optional). You should be able to show Tianyu the labels produced by your system as output. For example, for a Named Entity Recognizer, you should plan to show Tianyu the sentence or document being given to the system as input and then show him the entities and labels produced by your system.

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## Phase 2 Project Report

Each team should submit a short (roughly 2 page) Phase 2 Project Report in .pdf format that contains the following information:

**Name:** Team Name and Team Member(s)

**IE Task:** One paragraph that describes your IE task. Be sure to clearly describe the input and output (including label types).

**Resources List:** A list of all external software tools and data or other resources that your IE system uses, along with a URL showing where you got each one from.

**Technical Description:** Describe the overall design and technical components of your Phase 2 IE system. Explain the type of model that you built, its architecture, and how it works.

**Phase 2 vs. Phase 1:** List the differences between your Phase 2 IE model and your Phase 1 IE model. This might be a short list if you created a completely different type of model for Phase 2, or a longer list if you made many changes and/or additions to your Phase 1 model.

**Evaluation:** Describe how you evaluated the performance of your IE system, including how the data set was used and the evaluation metrics that you applied. Present tables and/or figures showing the results of your evaluations. Analyses of your system's behavior are also very welcome.

**Contributions:** For 2-person teams, describe the specific contributions of each team member. Remember that each team member must have clearly defined individual responsibilities.