Project Milestone V2.0

The original milestone says, by Feb.28, "At this stage, all the necessary parts before and after the GP recommendation system has been set up. " This still holds true currently. But the next step now would be focusing on the newly built OtterTune system and doing experiments on knobs configurations across different versions of MySQL. After that, if the results are far from satisfactory or if there's room for improvement, I'll focus more on extending the current ML pipeline. If the result is already good enough, I'll work on something else related to the new system. (we'll see what something else is.)

The following milestone makes two assumptions:
1) In the next two weeks, we do not find major issues regarding to the new system. The system is robust and trustful enough for doing experiments. If there are still some major issues (e.g.exceptions that will cause the system shutdown or the system is not working properly), I'll fix the system first before doing any experiment.
2) The current ML pipeline within the OtterTune system is not good enough for doing knobs configurations recommendations across different versions of MySQL or could very likely be further improved.

Mar.16.2018: Finish improving the OtterTune system. Hopefully we will not find any major issues. Start doing experiments on knobs configurations on MySQL.

Mar.30.2018: Continue doing experiments on knobs configurations on MySQL. Hopefully I could find some interesting results from the current OtterTune system (to see if the current ML pipeline, which is for knobs configuration recommendation for a specific version of the database, is good enough to do recommendations across different versions).

Apr.13.2018: After I've collected some interesting data about knobs configurations recommendation and assume that the current ML pipeline could be improved, I'll build and play around different ML models. (If I got into this stage, I'll probably consult another advisor of this project, Prof.Gordon, to seek advices on ML models that might work for recommendation across different versions.)

Apr.27.2018: Continue building and playing around different ML models. Re-do experiments on knobs configurations across different versions of MySQL to see if there's any performance improvement. (Hopefully yes. If there's no performance improvement, I'll further analyze the data to see what else could be done.)

May.11.2018:
[Good result] Got a new ML model that could do better knobs configuration across different versions of the database. I'll then try to extend the model to different databases, like MyRocks, Porstgres, etc.

[Not so satisfactory result] No ML models would largely improved the performances of knobs configurations across different versions. I'll further inspect the results and make a next-step plan.
[Other situations] The original ML pipeline is good enough for recommendations across versions as well. I have been working on something else and will get something different.