**Response to the Reviewers**

**Paper No. P014:** IMLD: A Python-Based Interactive Machine Learning Demonstration

We would like to thank the reviewers and the technical committee for their invaluable insights, constructive criticism, and expert suggestions on our paper. We incorporated many of the suggestions and corrected the issues they pointed out to improve the paper.

**Reviewer #1:**

1. You mention that you can generate only 2d data is it the same for data that are uploaded? Does the gui uses only 2d data in general?

*Response: Yes, only 2d data is used and if the user uploads data that is over 2 dimensions, it will take only the first two dimensions for x and y coordinates.*

1. Comparison with other existing toolboxes of similar function. Why your toolbox must be used instead why is it better? (e.g. in my mind the fact that is limited to 2d data is quite serious disadvantage compared to other toolboxes)

*Response: This toolbox is not made for research/application purposes, instead it focuses on allowing a student to have a visual for the data and algorithm that they selected. We found that there are not many tools that target the area of learning while allowing the user to use their own data and algorithms.*

1. Provide more information (e.g. list) of the algorithms supported. Do you support also svms for example (non-linear) then in the neural networks which are the settings that can be set by the user (e.g. depth, activation function, hidden layers, learning parameter etc)

Can the user visualize the effect of each of those parameters? Such a feature will be really interesting in the opinion of the reviewer.

*Response: Currently we do not support that feature in an accessible manner, but the user can run the algorithm multiple times and compare the results. In the future we are planning to incorporate a feature where the user will be able to control hyperparameters from the GUI for select algorithms.*

1. Please provide a github (or other source) from where the interested readers could get or access the toolbox.

*Response: Distributions of the code will be publicly available from the ECE 8527 web site: https://www.isip.piconepress.com/courses/temple/ece\_8527/resources/imld/.*

1. Some small language and grammatical errors:
   1. “The development of IMLD, which was first developed as” – Using 2 times different forms of develop. In my opinion you can remove the first “IMLD, which was first developed”
   2. Rephrase the sentence for the parameters module is not clear
   3. “The next part” is not next is another
   4. “features that IMLD enhances from” what do you mean?? Enhanced compared to the java user face or inherited from Python
   5. “The tool provides two patterns that users can choose from: points and gaussian, to draw their data in the Train sub-window or Eval sub-window.” Not clear at all. I think first of all that you mean “underlying mechanisms of the generation of the data” and not patterns and second you have not mentioned what the two windows are (maybe provide a figure)
   6. “if they so choose” invert choose and so
   7. “name, then” add “and” between
   8. “The scale of data can also be managed through the class tool while in the class menu, allowing users to replicate specific conditions of a homework assignment or data analysis.” Not clear at all what you mean by scale.

*Response: We addressed all of these grammatical errors within the abstract. Thank you for listing them individually.*

**Reviewer #2:**

1. Diagram improvements:
   1. The abstract should more closely match the terminology used in the box flow diagram in figure 2 (or vise-versa). For example, at one point the paper describes the ‘data handler’, but in the diagram there is only a box that says ‘Data’ that the User interacts with.
   2. The diagram itself should be re-done to make the data flow clearer.
      1. Are ‘Data’ & ‘Algorithms’ boxes part of the GUI? If not, shouldn’t the user interact directly with the GUI?
      2. Shouldn’t the ‘Model Class’ box be associated with the data that the User is creating?

*Response: We addressed these inconsistencies between the figure and the abstract. We choose to rename data within the figure to data generation, to help describe what this module is doing a little better. GUI was modified to indicate more clearly that the other modules are being controlled by the GUI. Model class was replaced with a more accurate representation of training and eval windows.*

1. A few minor grammatical mistakes.

*Response: We addressed these within the abstract.*

**Reviewer #3:**

1. The abstract can be accepted in the current form.

*Response: Thank you.*

1. The visual quality of both figures can be improved.

*Response: We improved both the figure for the architecture and user interface.*