

Step1: Fill up screening question

Step2: Fill up the consent form

Step3: Download study materials

Step 4: Finish Session #1 and Session #2 user study

Step 5: Fill up the survey

Session :

- This session consists of a user study using Session1_1 and Session 1_2 folders from the downloaded ContractStudy.zip file.
- In each folder, execute 3 buggy programs (BuggyProgram1.py, BuggyProgram2.py, BuggyProgram3.py) according to the given instructions in each folder.
- Set #1 (Session1_1) buggy programs will be executed using regular Keras and execute Set #2 (Session1_2) buggy programs will be executed using Keras with annotated DL contracts, we named it @Keras.

Tasks:

- Execute BuggyProgram1.py, BuggyProgram2.py, BuggyProgram3.py from both sessions directories (Session1_1 and Session 1_2).
- Detect the bugs in the buggy programs by following specific instructions in Session1_2. In Session1_1, you can observe the output without any error message and should find the accuracy is low or training time is high. Because there is a silent bug in each of the codes which regular Keras does not warn us but annotated @Keras does.
- In Session1_2, you can observe the error message after “contracts.interface.ContractException:”. Fix those 3 buggy programs according to the provided suggestion only in Session1_2 and execute after fix.
- Fill up a survey after executing Session1_1 and Session 1_2 buggy programs.

After completing the two sessions, please delete all the files of this user study.