Invariant Inference Framework

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Contents

Chapter 1

Invariant Inference Framework:

This is the result of our implementation of the paper `An Invariant Inference Framework by Active Learning and SVMs` by Li Jiaying.

For you to run the experiments on your own machine, please follow the steps below to set up your experiment environment.

Work on Invariant Inference Framework

To build the framework currently is very easy, there is not much dependencies you need to satisfy before build the whole project.

Dependencies, for Windows/Linux/MacOSX Users:

- `cmake` version 2.8 or later.
- `libsvm` remember to put {libsvm}/bin folder into $PATH.
- `klee` This is optional currently.
- [Build tools](), such as make, Visual Studio 2015, or Xcode.

###Build InvariantInferenceFramework

```
1 git clone git@github.com:lijiaying/InvariantInferenceFramework.git
2 cd InvariantInferenceFramework
3 cd test
4 mkdir build
5 cd build
6 cmake .. -G [your platform]  // just use cmake .. if you are not sure
7 make
8 ./IIF_learn
```

Add your tests to this framework

As InvariantInferenceFramework is integrated with your examples, you need to do some modification on source code level before you can test your examples.

- rewrite your loop code in a function with the name you like, my_loop_example for instance
- put the function in {examples/examples.cpp} or create a new file contains the function and remember to include "../include/header.h"
- edit file {include/config.h}, add "define my_loop_example m", and "#define VARS (the number of parameters in your loop)"
- make your project and then run the executable file

Experiments results:

- simple2
- simple3
- ex1
- f1a
- f2
- substring1