

Invariant Inference Framework

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Contents

1	Invariant Inference Framework:	1
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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.
- **z3**
- **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
```

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.

- READ carefully one example file in test folder before you write your own test.
- rewrite your loop code in a function with the name you like, my_loop_example for instance.
- modify function and function name as parameter for register_target which is called by main function.
- rename your test file with the number of parameters and a "_" as prefix.

- modify the second line in [CMakeLists.txt](#) in the project folder as the numbers of parameter you need in your program.
- After the above step, you can make your project and then run the executable file.

Experiments results:

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