



## Homework H8

### 1 Description

Write an LLVM pass starting from the code you have developed for H7.

The goal of this assignment is to exploit loop unrolling and/or loop peeling transformations, which are provided by LLVM, to increase as much as possible the number of constant propagations of CAT variables.

### 2 Testing your work

H8.tar.bz2 includes some examples of C programs.

As for H7, your pass will be invoked until a fixed point is reached.

As for H7, your pass cannot save a state.

### 3 LLVM API and Friends

For this homework you need to use some of the new APIs used in LLVM\_loops.tar.bz2

### 4 What to submit

Submit via Canvas the C++ file you've implemented (CatPass.cpp).

For your information: my solution for H8 added 77 lines of C++ code to H7 (computed by `sloccount`).

# Good luck with your work!