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Lab 3 Report

I honestly wasn't able to get kernels running on the fpga. I converted the sequential code into a single file which made it easier to compile an executable file. However, whenever I try to compile the .cl file with Picasso, Picasso would fail and leave the terminal running vivado.

The kernel I wrote (and will include) works by creating a 1-dimensional array of 256 work items. Each work item represents one row (variable ‘i’) within the fwd97_pd function. The code as it’s written doesn’t actually have any race conditions between these elements because of the way the program is implemented – predict update in one direction, transpose, then predict update the same direction, un-transpose.

My sequential code has slight speedups both from the TA’s implementation as well as some loop-unrolling and avoiding certain Boolean checks within the fwd97_pd function.