160256U
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- *What?*

    The FYP that we have selected is a framework to be used by programmers to determine whether a problem is efficient to execute in CPU or GPU. The programmers are allowed to provide some parameters to a function in the framework. The framework would suggest whether it should be executed in a CPU or GPU. It is a binary classification problem and can be done with statistically with logging or by machine learning.

- *Why?*

    The software engineers and programmers often need to design and implement code for both systems that have a GPU and does not have a GPU as it is indeterministic earlier. The framework would allow them to let the framework to determine that on which processor it might be executed efficiently. It might give almost 75 gain on proper predictions. The prefetching of branch predictors in CPUs is a very good example as a similar one.

- *How?*

    The programmers can give properties of the problem and whether GPU there or not as parameters. The function in the problem will analyze them statistically and with its previous knowledge and returns a boolean saying on which it should be executed for better performance gain. We have not decided yet whether to implement it with a systematic algorithm or machine learning. However, keeping its statistical history of performance gained would help to improve performance and gain further as systems in a context would get similar kind of problems to processing.