

Overview of the PASTA Project

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Research Programme on Machine Learning

Overview

— [Who Is Involved?

— [PASTA in a Nutshell

— [Problem Description

— [PASTA and Machine Learning

— [Hopes and Expectations

Who Is Involved?

— [Nigel Topham, Mike O'Boyle, Björn Franke

— [Oscar Almer, Richard Bennett, Igor Böhm, Alastair Murray,
Freddi Qu, Marcela Zuluaga

PASTA in a Nutshell

Automating the Design of Embedded Processors

Interaction between Applications, Compiler, Architecture, Micro-architecture, Physical Implementation

Tools operate “in isolation” within their layer despite mutual/circular dependences.

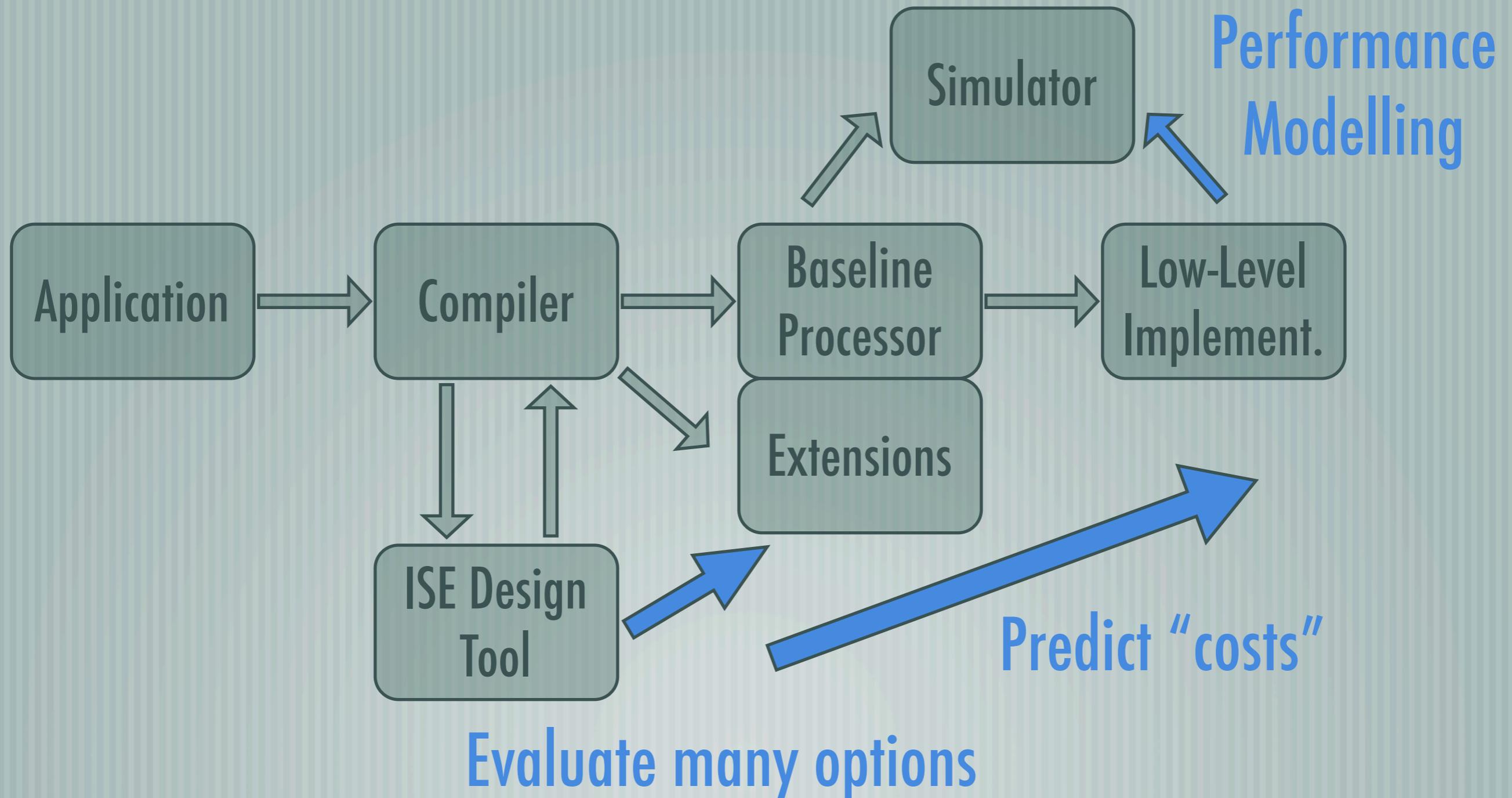
Exact tools are slow, fast tools are inaccurate.

Relation to ML

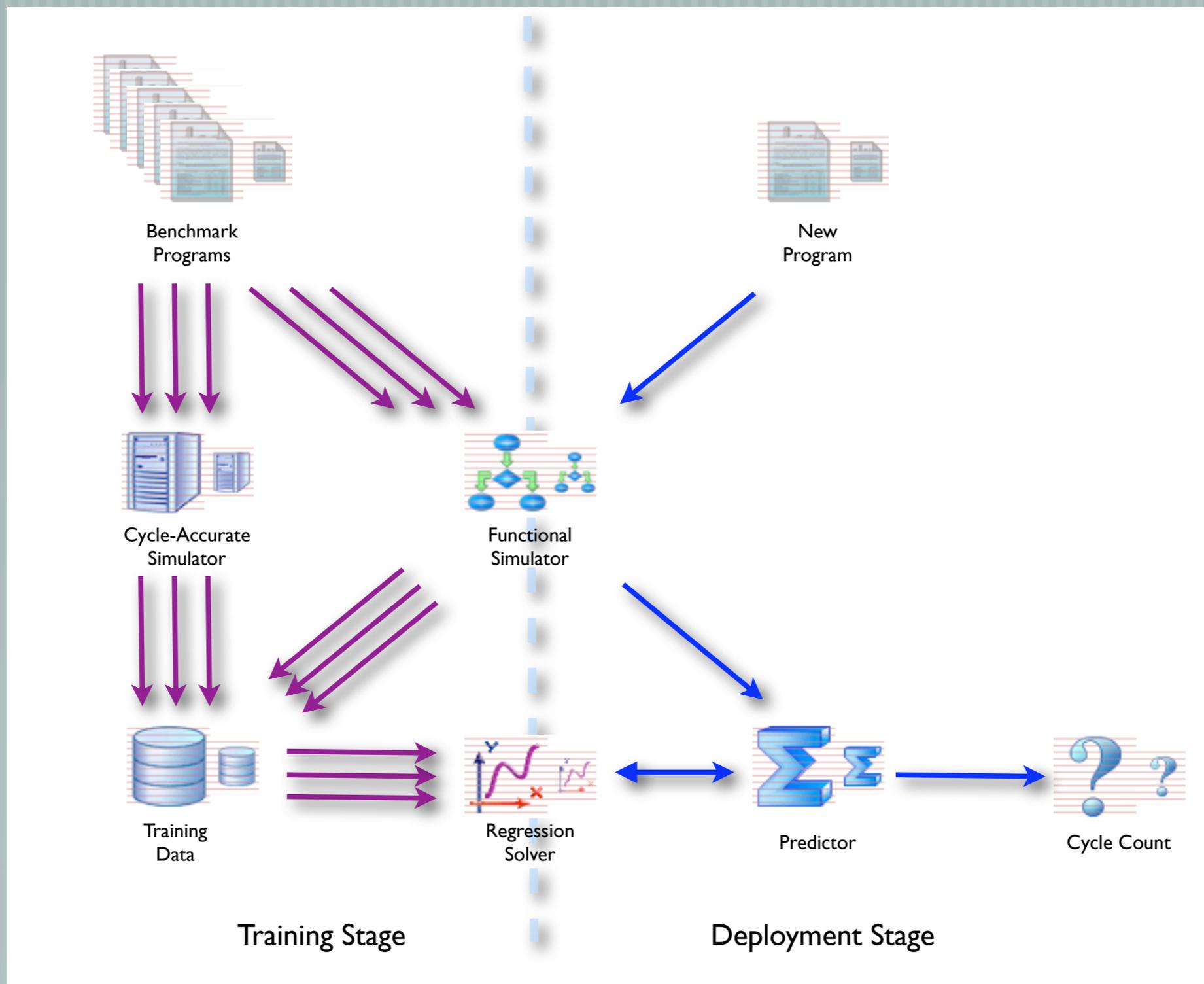
— [We are users of Machine Learning!

— [We don't do research in Machine Learning!

Problem Description



PASTA and ML



hopes and Expectations

— [Inspiration and ideas

— [Collaborations

— ML in exchange for lots of data

— [Challenging “real-world” problems to solve



— [Promote ML in Computer Systems community