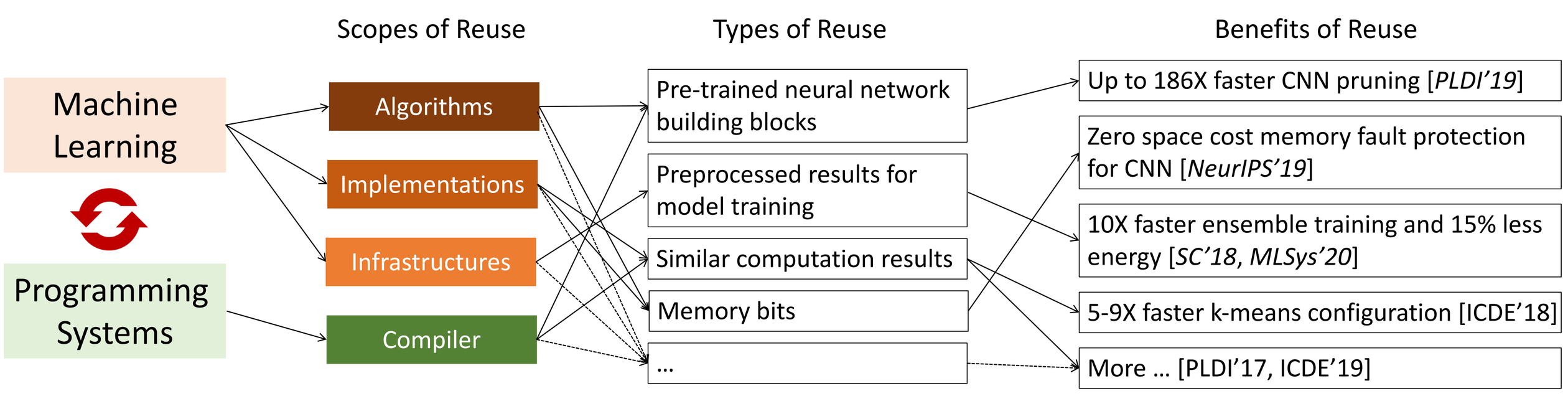
Scopes of Reuse
Types of Reuse
Benefits of Reuse
Machine Learning
Programming Systems
Algorithms
Implementations
Infrastructures
Compiler
Pre-trained neural network building blocks
Preprocessed results for model training
Similar computation results
Memory bits
…
Up to 186X faster CNN pruning [PLDI'19]
Zero space cost memory fault protection for CNN [NeurIPS'19]
10X faster ensemble training and 15% less energy [SC'18, MLSys'20]
5-9X faster k-means configuration [ICDE'18]
More … [PLDI'17, ICDE'19]