

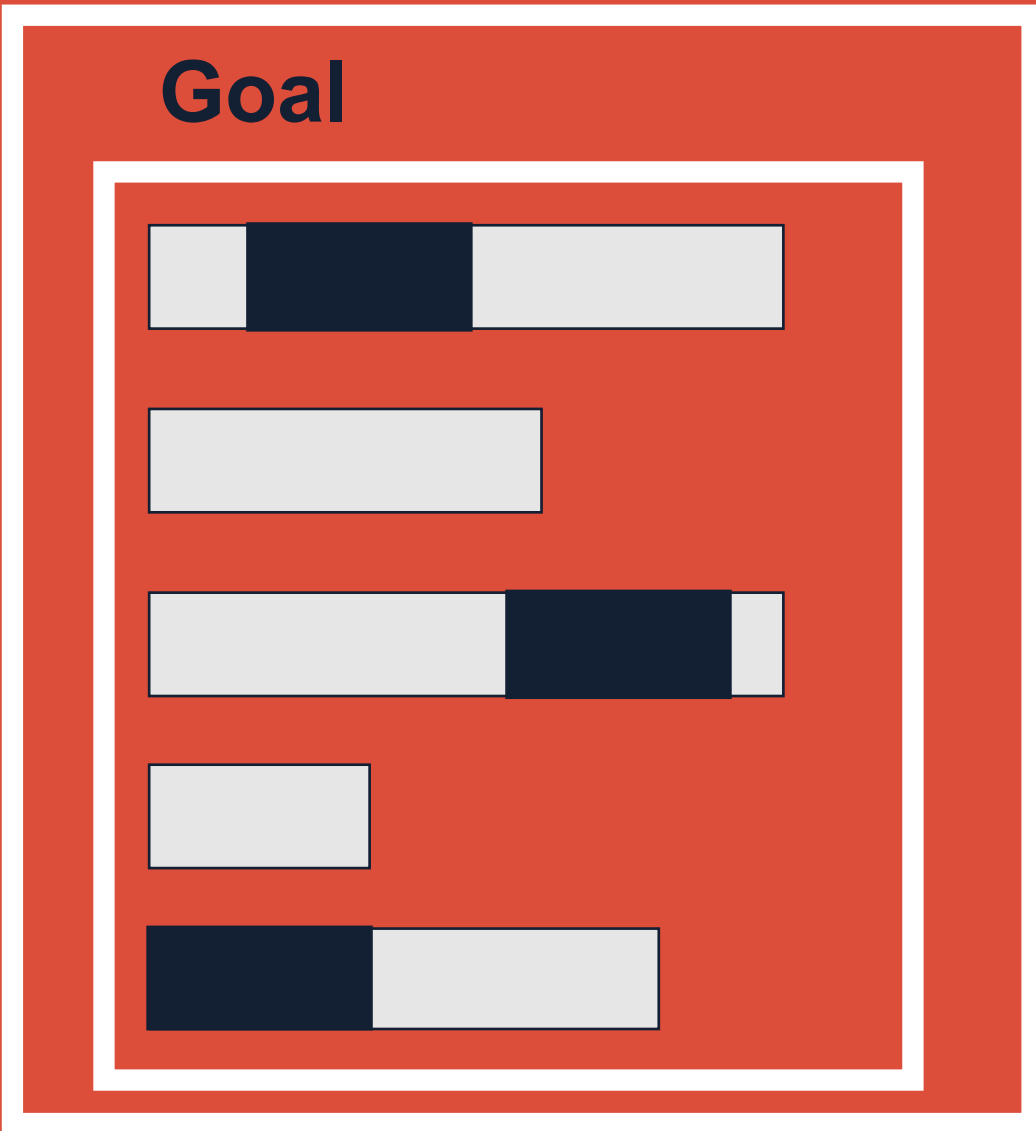
Towards Methods for Identifying High-Quality Domain-Specific Programming Plans

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Domain-specific programming plans can support application-focused learning, which is particularly motivating for non-majors [1].



A domain-specific programming plan is a piece of code common to programs from a particular application area that achieves a specific goal in that context.

But we lack clarity on how to identify domain-specific plans at scale.



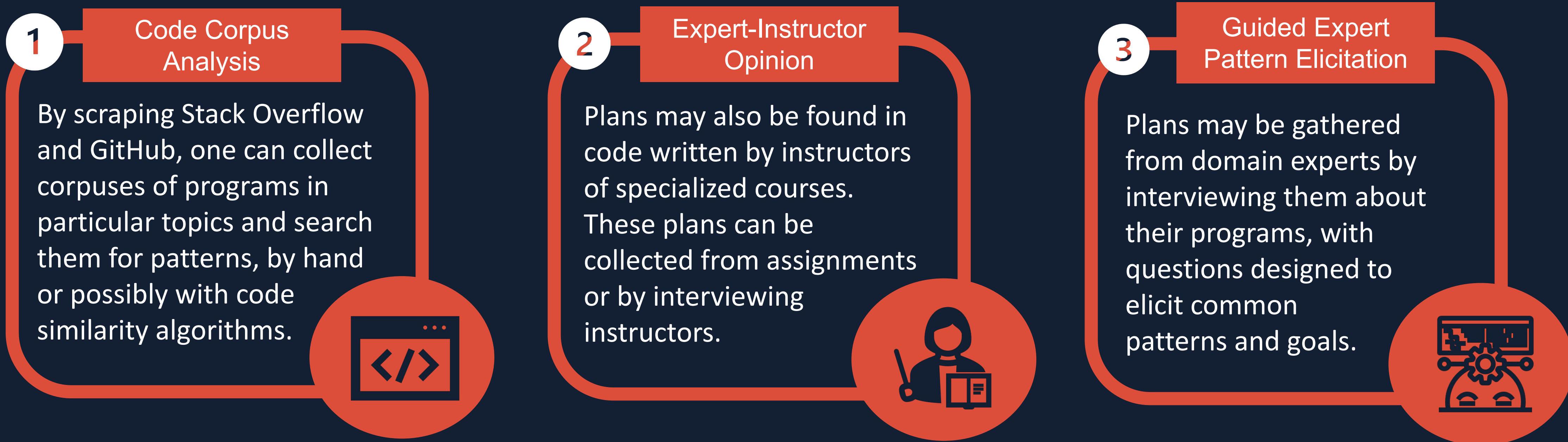
Plans identified in CS1 context are too general to represent work in specific domains.





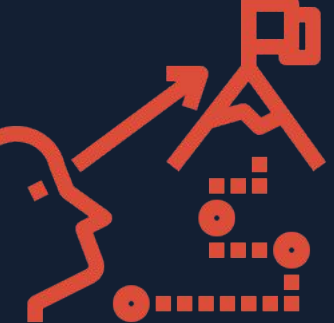
Authors typically omit details of their plan identification process.

[1] K. Cunningham et al. "Avoiding the Turing Tarpit: Learning Conversational Programming by Starting from Code's Purpose."

What strategies might identify domain-specific plans?



What makes a 'good' domain-specific plan?

Metrics		Code Corpus Analysis 1	Expert-Instructor Opinion 2	Guided Expert Pattern Elicitation 3
 The plan should be commonly used in well-written programs.	<	✓		✓
 Plan information should not be too complex.	<		✓	
 The plan should achieve a goal specific to its domain.	<		✓	✓