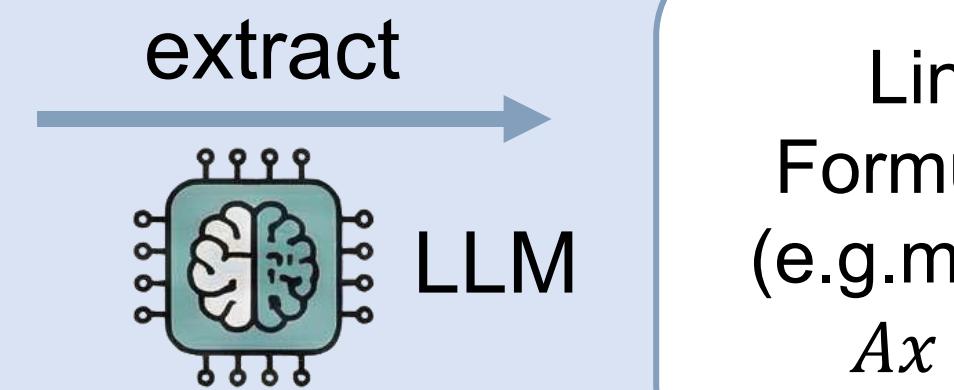


## Natural Language Description

Refinery Process Production

Flow\n\n```mermaid\nflowchart LR\nA1((Crude oil 1)) --> B[Distillation]\nA2((Crude oil 2)) -->B\n\n...\n```

## Linear Scenario( Current methods focus)



Linear Formulation  
(e.g. minimize  
 $Ax \leq b$ )

Direct Mapping to Solver

SEMANTIC Alignment



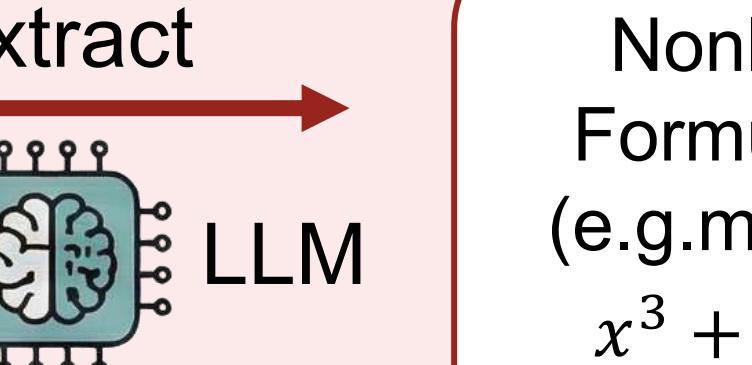
CODE

Correct!

Modeling Semantic

Coding Semantic

## Nonlinear Scenario



Nonlinear Formulation  
(e.g. minimize  
 $x^3 + \frac{1}{y} \leq c$ )

**SEMANTIC GAP**

...  
model.addConstr(A \*  
x1\*\*3 + 1/y <= C)  
...



SYNTAX ERROR