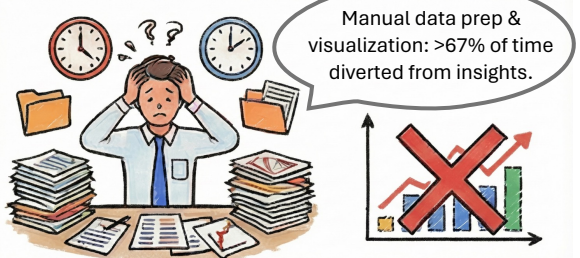
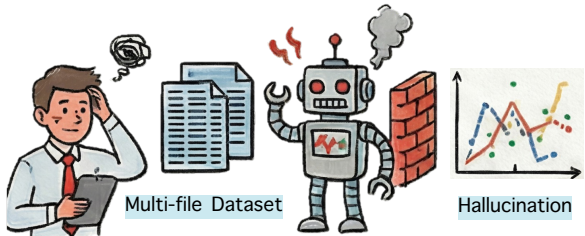


## THE CHALLENGE: WHY AUTOMATED VISUALIZATION FAILS

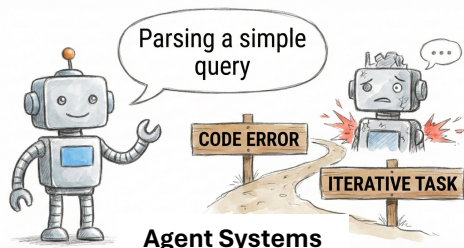


Manual visualization is a time sink.



### Current LLM Tools

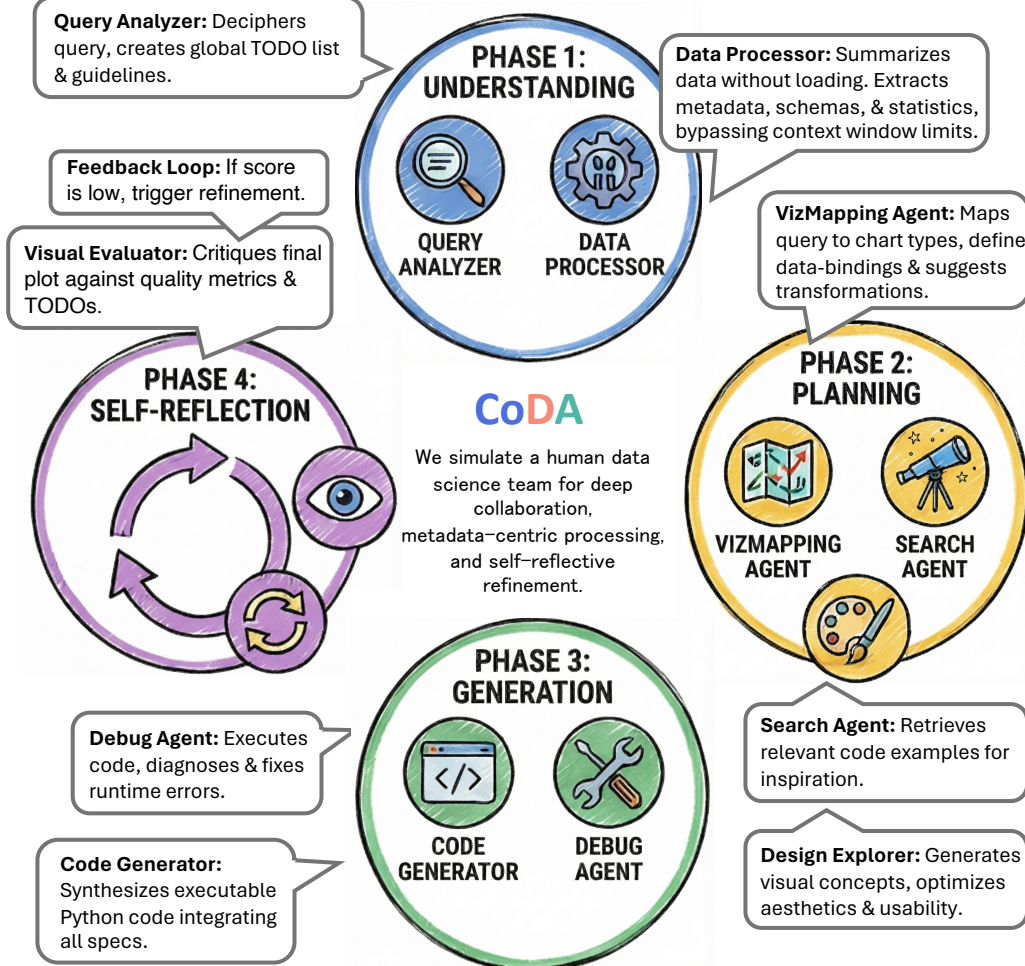
Brittle tools struggle with complex data, exceed token limits, and hallucinate.



### Agent Systems

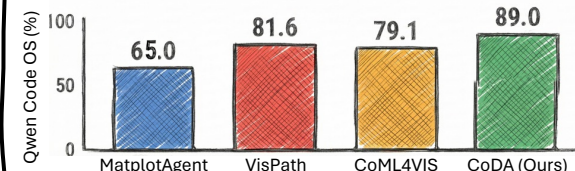
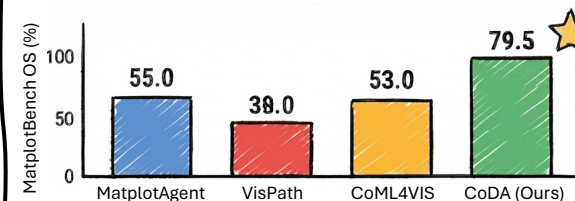
Lack deep collaboration, resilient refinement, and fail on complex tasks.

## THE SOLUTION & HOW CoDA WORKS: A FOUR-PHASE COLLABORATIVE PROCESS



## THE RESULTS: CoDA'S SUPERIOR PERFORMANCE

### KEY FINDING: SIGNIFICANTLY OUTPERFORMS BASELINES



Substantial gains in execution, quality, and overall score, with up to **41.5%** improvement.

### VISUAL COMPARISON: SUCCEEDS WHERE OTHERS FAIL



Baselines fail on complex queries (e.g., 3D, multi-source), CoDA faithfully captures user intent.

### CORE COMPONENTS ESSENTIAL (ABLATION STUDIES)

- Self-Evolution:** Critical for robustness.
- Global TODO:** Boosts performance by 4.4%.
- Example Search Agent:** Prevents errors.

