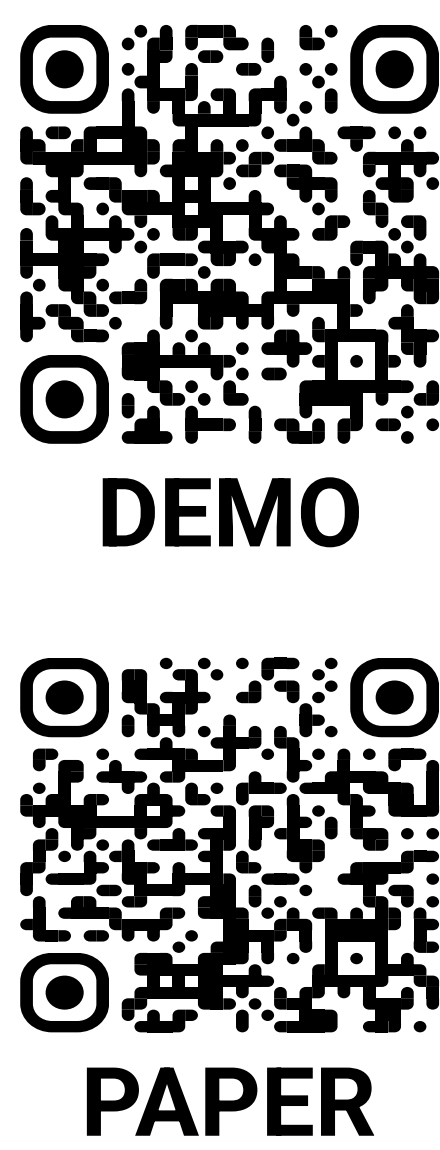


# Criticality:

## Scaffolding Decision-Making with Critical Thinking & Steerable Reasoning Traces

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### Introduction

LLMs are often deployed for high-stakes decisions that require grounding in data reports.

User

I'm an undergraduate student studying computer science. Help me decide which fields I should pursue and skills to focus!

ChatGPT Reasoned for 13 m 42 s

Congrats on getting close to the finish line! Below is a practical way to choose a field and a 12-month upskilling plan that will ...

Where the opportunity is (2025–2030):

1. Fastest-growing tech roles

Global employer surveys point to Big Data Specialists, FinTech Engineers, AI & Machine Learning Specialists, and Software/Application Developers among the very top roles by net growth ...

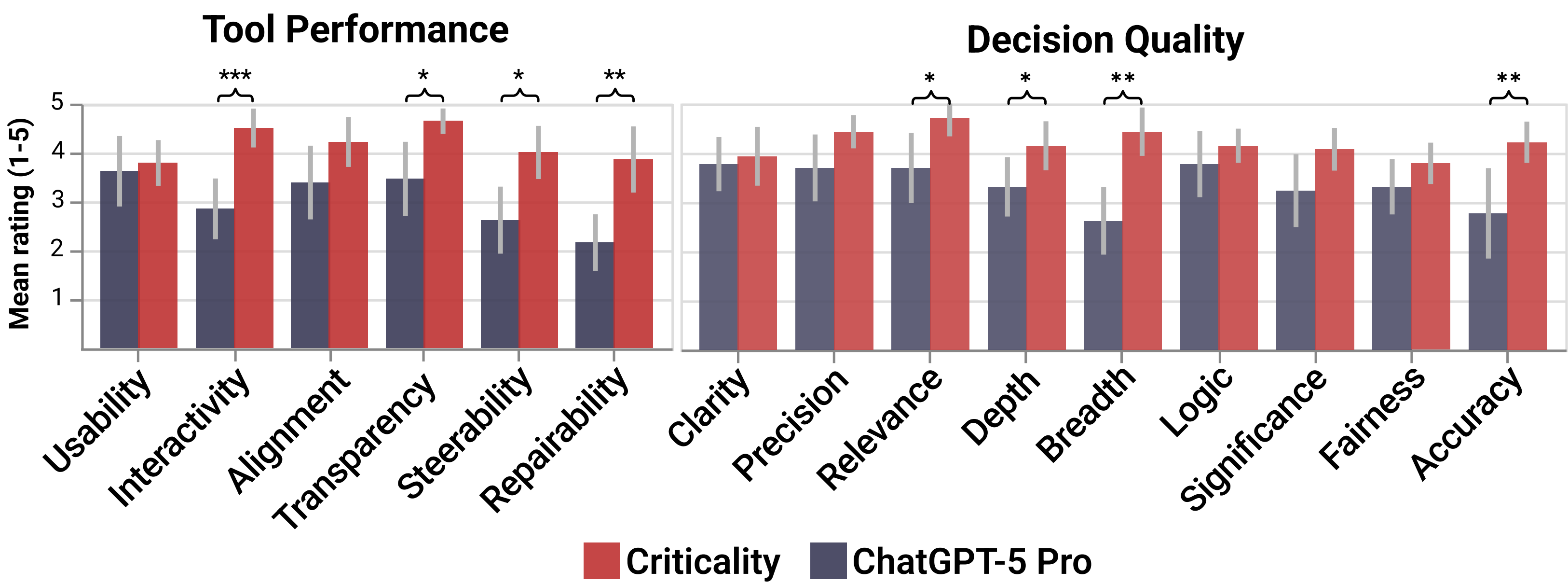
### Problem

Interviews with 5 business executives and analysts revealed three key challenges:

- Passive Interaction**  
Users passively wait for lengthy outputs, lacking intermediate **control** or **steerability**
- Black Box Reasoning**  
Reasoning is **opaque**, **unstructured**, and difficult to verify
- Lack of Evidence & Data Link**  
Generated claims lack **explicit citations** or links to the source text

### Evaluation

Within-subjects study (N=13) comparing against ChatGPT-5 Pro



“I feel like the industry is coming up with 40 different UIs for LLMs. And I think this one could be used in a lot of those, not just for decision-making. This flow is great.”  
- P1 (Business Intelligence VP)

### Solution

Precision **Poor**  
Specify what ‘informed career decisions’ entails, such as the types of roles, industries, or skillsets you are targeting

Defining Goal

The user seeks to make informed career decisions that will position...

Identifying Questions

Listing Assumptions

The user’s personal interests and aptitudes can be effectively aligned with high-demand technical fields  
10 Evidence  
Strongly Supporting Weakly Supporting  
Strongly Supporting Page 282 • Top >

The evidence shows that computer science majors are taking the highest proportion among the graduates who recently entered the technical fields with high-demand. These include cybersecurity, AI/ML, software engineer...

Technical skills can be acquired and mastered within a reasonable timeframe to remain competitive  
10 Evidence  
Supporting Neutral Contradicting  
Weakly Contradicting Page 6 • Middle >

The evidence indicates that a significant portion of the workforce (11 out of 100) is unlikely to receive the necessary upskilling or reskilling, suggesting that acquiring and mastering technical skills within a reasonable timeframe is ...

Comparing Options

Criteria	Options	Cybersecurity Focus	AI/ML Specialization	Emerging Tech Portfolio	Full-Stack Development
Overall Score		★★★★★ 3.7	★★★★★ 3.6	★★★★★ 3.2	★★★★★ 2.9
Skill Acquisition Speed	x1 <input type="range"/> x10	4.0	3.0	3.4	4.2
Salary Competitiveness	x1 <input type="range"/> x10	3.2	5.0	1.9	1.0
Job Growth Potential	x1 <input type="range"/> x10	2.9	5.0	2.5	1.4

Insights & Takeaways

Personal interest favors AI/ML and moderately supports cybersecurity, suggesting technical aptitude aligns with high-demand fields  
Reference to the Options & Criteria  
Cybersecurity Focus Personal Interest Alig...  
10 Evidence

AI/ML specialization offers the strongest overall career opportunity by dominating in salary, growth potential, and industry relevance  
Reference to the Options & Criteria  
AI/ML Specialization Salary Competitiveness  
10 Evidence

Implications & Impact

Short Term - Positive

- Immediate high earning potential with AI/ML roles commanding premium salaries above other CS fields
- Strong job placement opportunities due to 80-100% projected growth in AI/ML positions

Reference to the Options & Criteria  
AI/ML Specialization Salary Competitiveness  
10 Evidence

Short Term - Negative

- Extended learning curve delays income generation compared to quicker-to-master fields
- High competition from global talent pool in popular specialization like AI/ML

Reference to the Options & Criteria  
AI/ML Specialization Skill Acquisition Speed  
10 Evidence