



Career Compass: Visual Analytics for AI-Powered Career Preparation

Vedanshi Shah, Dylan Cashman

vedanshi@brandeis.edu, dylancashman@brandeis.edu

Department of Computer Science, Brandeis University



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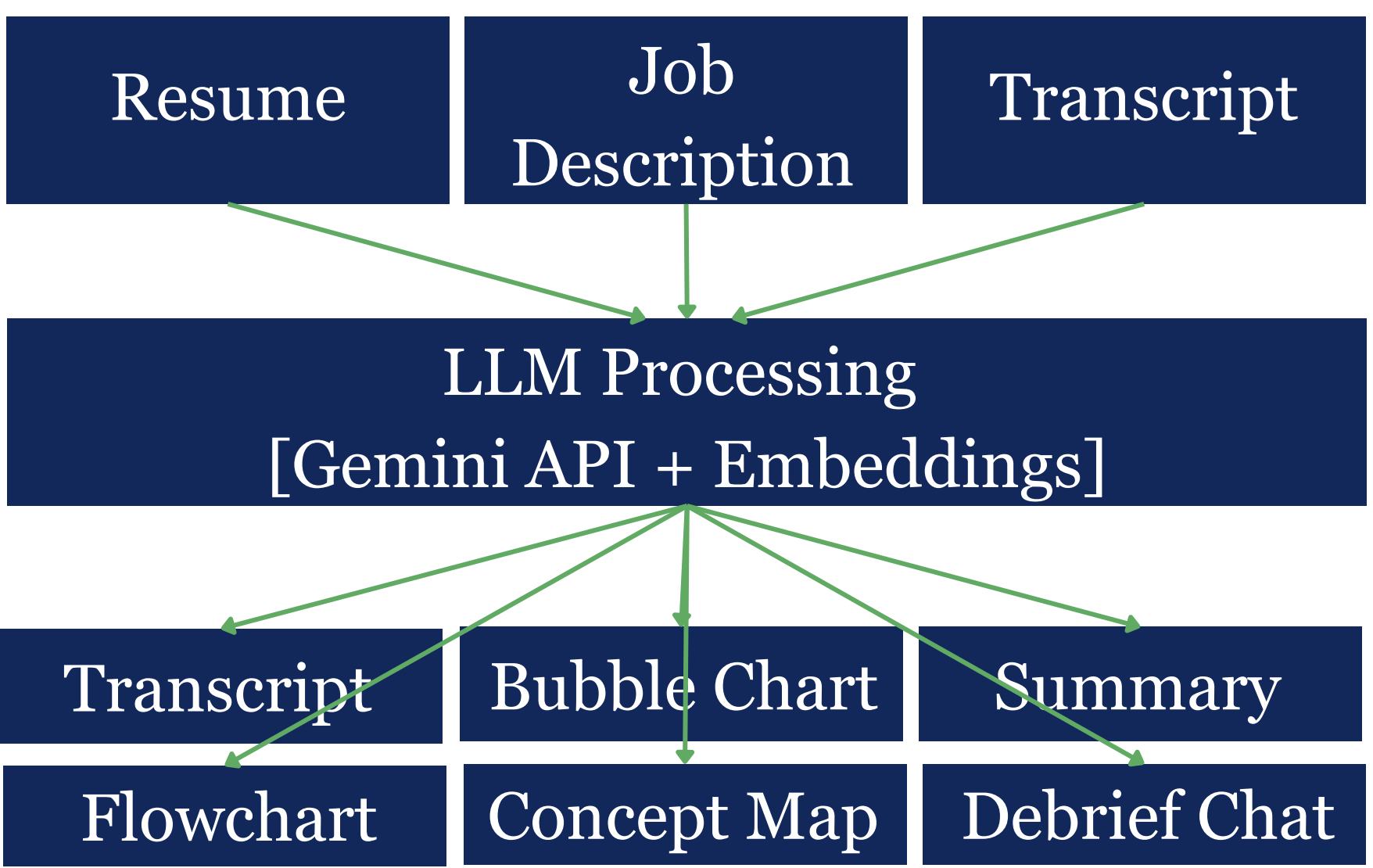
MOTIVATION

- Job hunting = stressful, fragmented, opaque.
- Existing tools → generic scores, no real reflection.
- Students need evidence-based, interpretable feedback to build confidence.

Career Compass unifies interview practice with transcript-grounded visual feedback.

SYSTEM OVERVIEW

- **Data in:** Resume + Job Description + Mock Interview.
- **Processing:** Large Language Model (Gemini API) + embeddings.
- **Data out:** Transcript-anchored visualizations + coaching feedback.



REFLECTIVE AI DESIGN PRINCIPLES

- 🎯 Productive Struggle → Challenge sparks reflection.
- 🎭 Adaptive Realism → Context-sensitive interviews.
- 🔗 Workflow Cohesion → End-to-end integration.
- 📊 Motivational Visualization → Visuals build confidence.
- ✅ Structured Complementarity → Pair exploration with rubrics.

KEY FEATURES

1. Adaptive Mock Interviews [2]

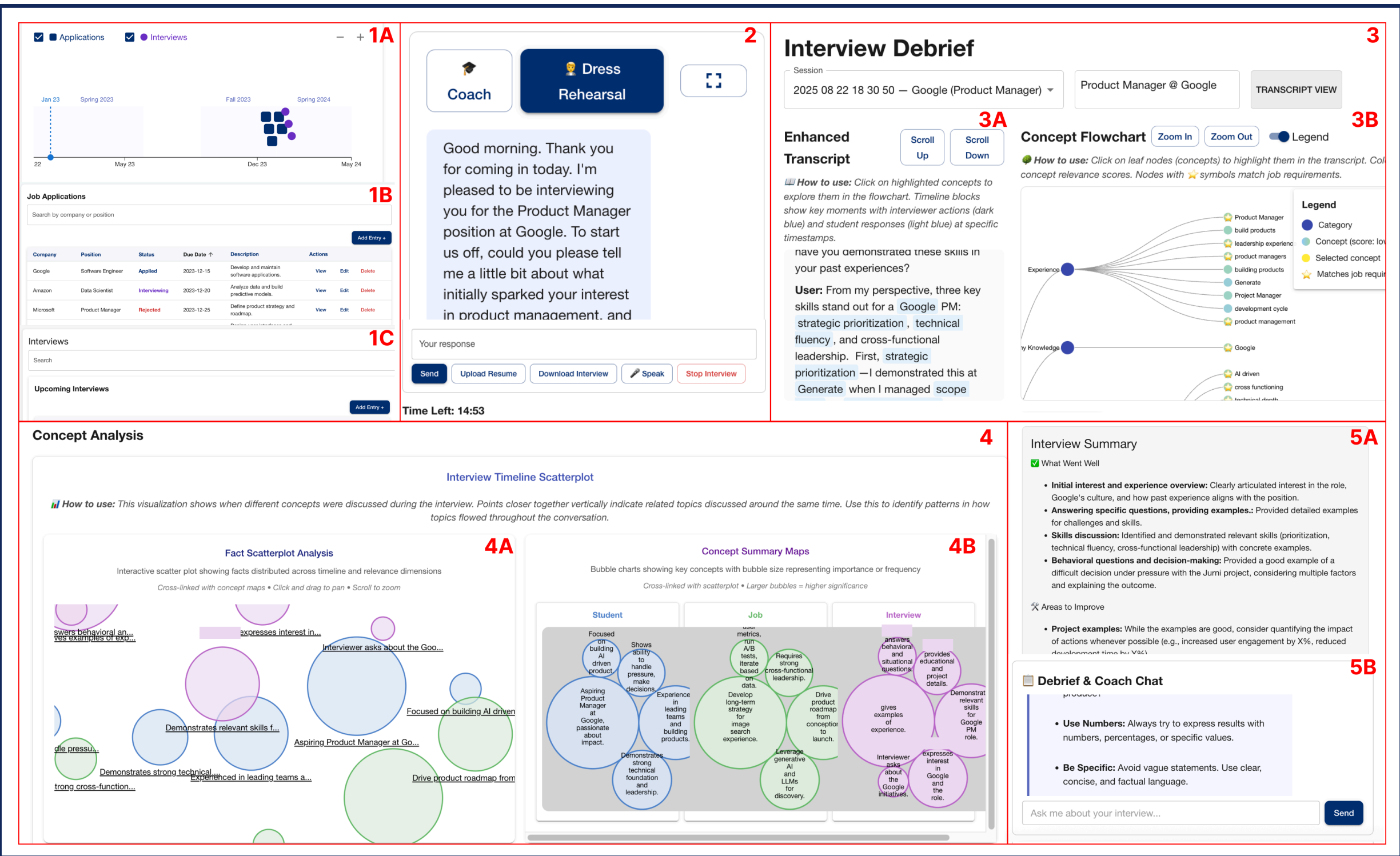
- Coach Mode → supportive practice.
- Dress Rehearsal → realistic high-pressure.

2. Evidence-Linked Visualizations

- Transcript highlights → concepts + strengths. [3A]
- Flowcharts → thematic progression. [3B]
- Bubble charts → resume, job, interview alignment. [4]

3. Reflective Coaching [5A + 5B]

- Chat with AI coach after interviews.
- Suggestions grounded in your transcript.
- Visuals update live with your revisions.



ETHICAL CONSIDERATIONS

- Risk of bias in AI feedback and cultural styles.
- Access challenges for under-resourced students/institutions.
- We envision Career Compass as a co-pilot for growth, not a replacement for human mentorship
- Responsible deployment requires fairness checks and hybrid human-AI use.

Transparency

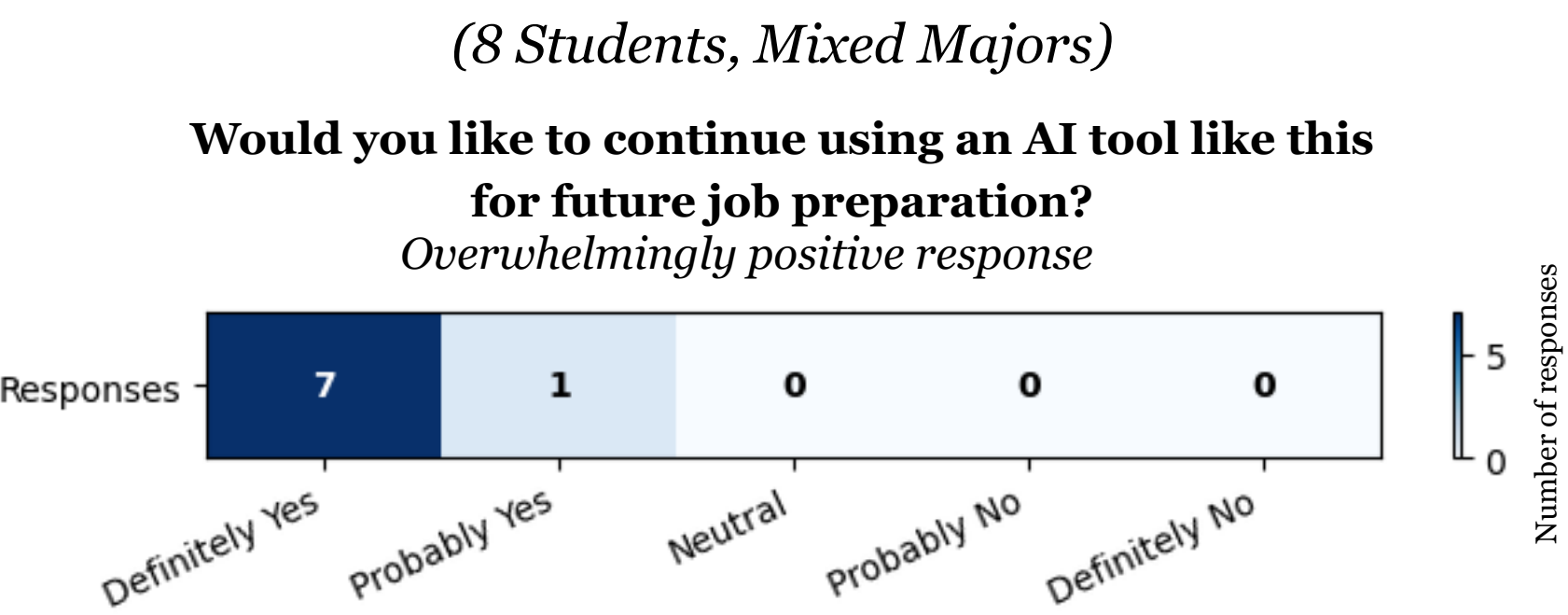
Equity

Trust

Agency

EVALUATION

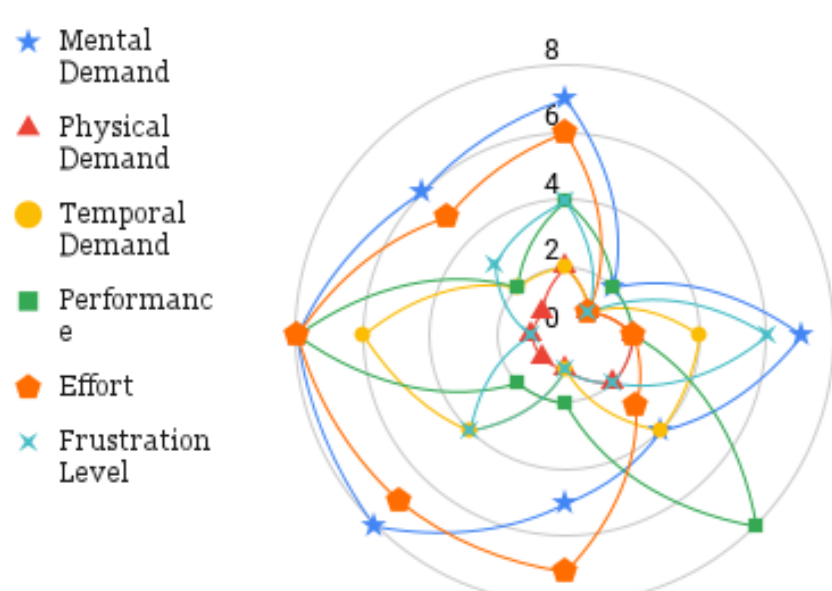
- **Realism:** 7/8 → “Extremely realistic.”
- **Satisfaction:** Avg 4.75/5.
- **Adoption:** 7/8 “Definitely would use again.”
- **Workload:** Moderate effort, low frustration → productive struggle.



(8 Students, Mixed Majors)

Would you like to continue using an AI tool like this for future job preparation?
Overwhelmingly positive response

NASA TLX Scale



TAKEAWAYS

- Transforms unstructured interviews into interpretable data.
- Bridges AI and visualization for reflective job prep.
- Generalizable to other high-stakes learning (healthcare, public speaking).

“I would definitely use this again before an interview.” | “The charts showed me exactly where I was strong and weak.”

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https://linktr.ee/career_compass_ness

SCAN

