

CS435:
HUMAN COMPUTER
INTERACTION

CAREERBUDDY

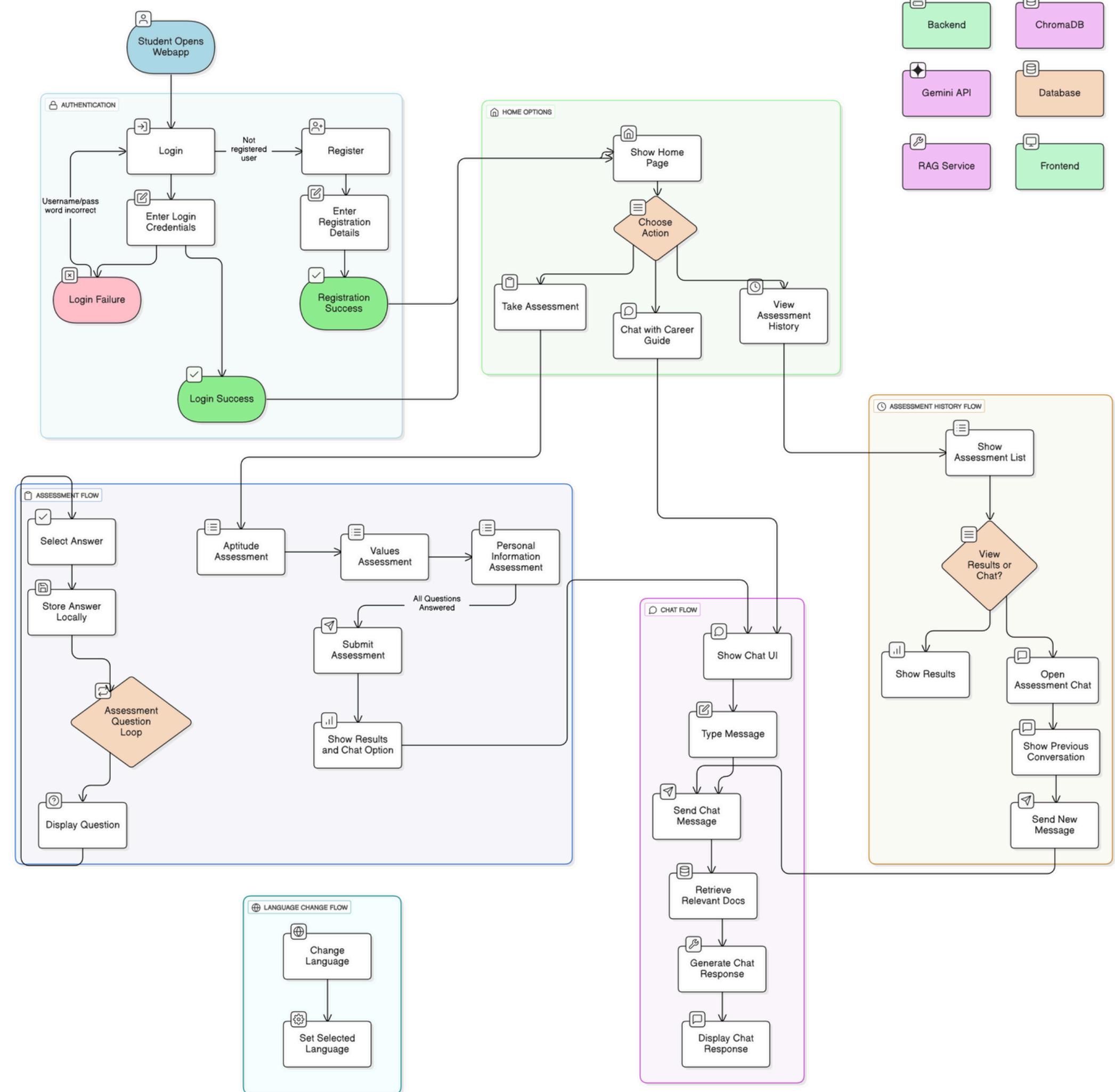
HIGH FIDELITY PROTOTYPE

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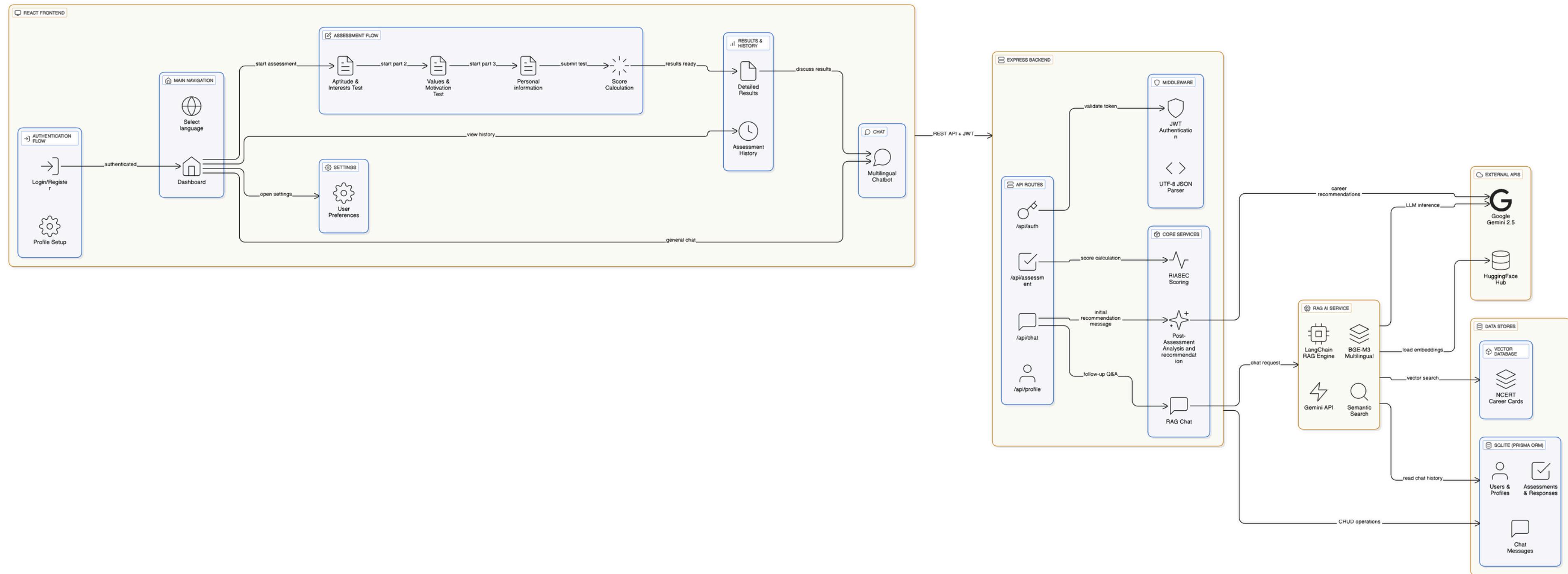
DEMO

[Link to demo video](#)

CORE INTERACTION FLOW



SYSTEM DESIGN AND ARCHITECTURE



COMPROMISES IN DEVELOPMENT

HORIZONTAL COMPROMISES

- The prototype focused on 3 assessments with limited question set, but we could have broader psychometric evaluations.
- Currently only 6 languages: English, Hindi, Tamil, Telugu, Marathi, Gujarati are supported. However it is set up to be extendable to many more Indian languages. Future prototypes may also focus on conversational nuances, fine tuned for regional vocabulary etc.
- The knowledge base of careers was limited to those mentioned in NCERT career cards. We could extend to a much larger base.

VERTICAL COMPROMISES

- System lacks offline progressive web app functionality, reducing vertical complexity in state synchronization at the cost of continuous connectivity requirements.
- Limited retry mechanisms and simplistic fallbacks for AI API calls, accepting occasional failure scenarios rather than implementing complex error recovery systems that increase vertical complexity.
- Real time information about career salaries, educational institute rankings can be integrated

CONCEPTUAL DESIGN

DESIGN METAPHOR

The system follows a guided-journey metaphor where students move through structured career evaluation stages, supported by an AI acting as a virtual career counselor.

DESIGN DECISIONS

- Input Modality: Likert-scale questions chosen for reliable scoring and reduced cognitive load.
- Recommendation Format: Structured layout to support clear comparison and actionable planning.
- Interaction Pattern: Combination of a conversational chatbot with static recommendation displays to support different learning styles and follow-up inquiry.

DESIGN SPACE

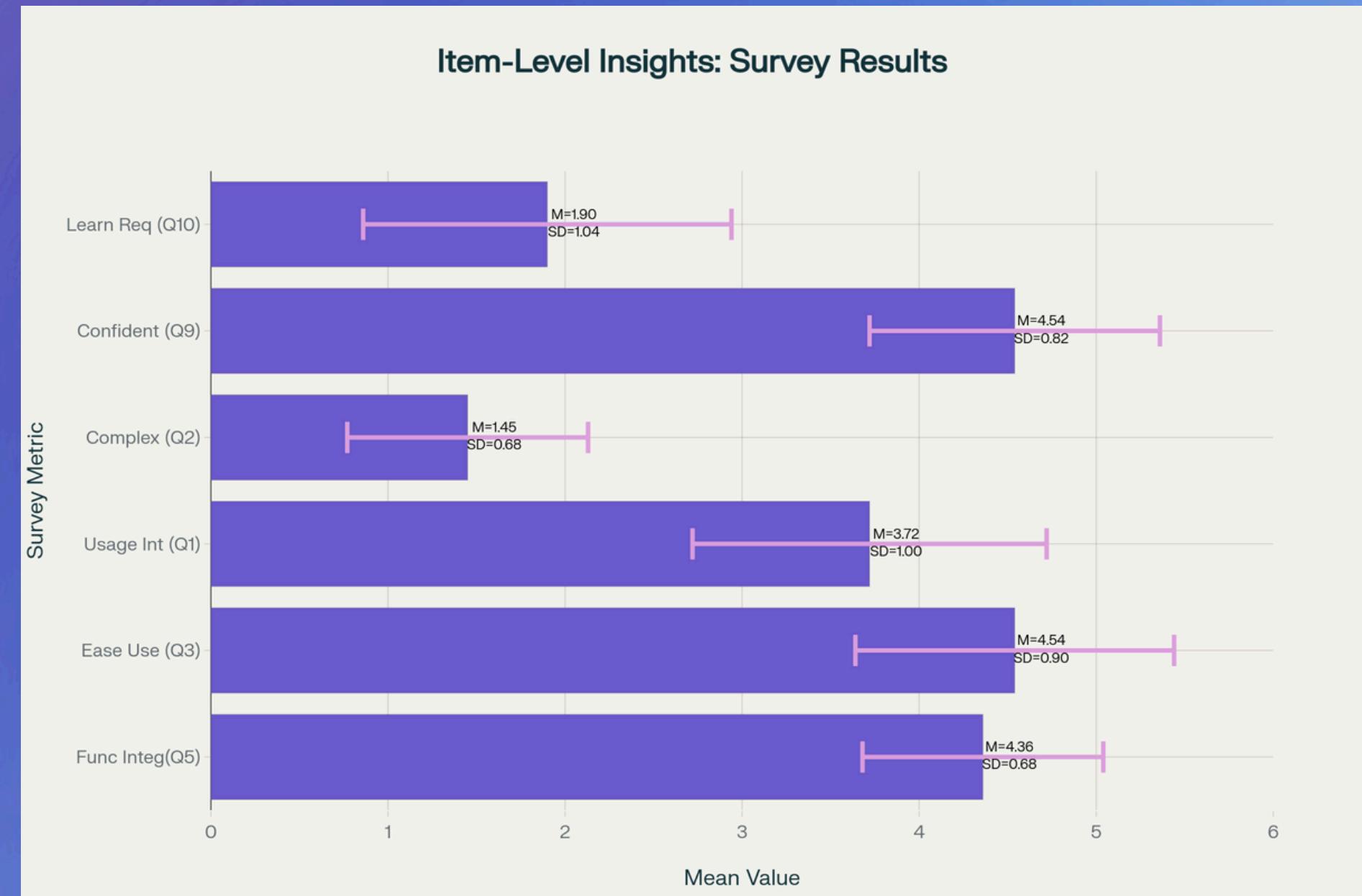
- User Management: Handles authentication, profiles, and basic demographic data like age, grade, and language preferences.
- Assessment Orchestration: Runs the multi-test workflow (RIASEC, values, preferences) and saves progress for continuation.
- Recommendation Generation: Combines RIASEC rule matching with generative AI to produce personalised, confidence-scored career suggestions.
- Conversational Guidance: Offers two chatbot modes—general exploration and results-focused discussion—with separate contexts.
- Historical Analytics: Tracks assessments and shows long-term changes in interests.
- Accessibility & Personalisation: Adjusts to user needs through language settings, reading-level support, inclusive UI, and personalised pacing.

EVALUATION RESULTS

- Evaluation Method: Natural environment, System Usability Scale Test, conducted on google forms
- Scores are well above the industry benchmark (68) and also exceeds the threshold for excellent usability (80.3), as seen below:
 - Mean SUS Score: 83.18
 - Median Score: 85
 - Standard Deviation: 11.30
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Interpretation:

- The system is perceived as easy to use, simple, and well-integrated, with users reporting high confidence. These are hallmarks of strong usability.
- The only middling area is regular use intention, which likely depends on perceived usefulness, not just usability. In our case, this is because testing was done on college students instead of grade 10 students due to lack of availability of target demographic.
- A minority of users may need more support or clearer onboarding, as seen from variability in the learning-requirements item.



THANK YOU

QUESTIONS?



OUR GITHUB PAGE