Breaking Barriers: Rethinking Traditional Learning Methods

- **Traditional assignments in large courses often lack adaptability**, failing to meet the diverse learning needs of students. This leads to **low engagement, reduced motivation**, and a disconnect between students and the material.
- Without opportunities for reflection or feedback, **students often complete tasks without fully understanding the concepts**, which limits long-term retention and real-world application.

The Solution

- Our project explores how **AI can enhance learning** by adapting to student input and providing dynamic personalized support throughout the assignment process. By comparing this method to traditional assignments, we evaluate whether **generative AI can improve student understanding and engagement and support scalable personalized learning** in large classes.

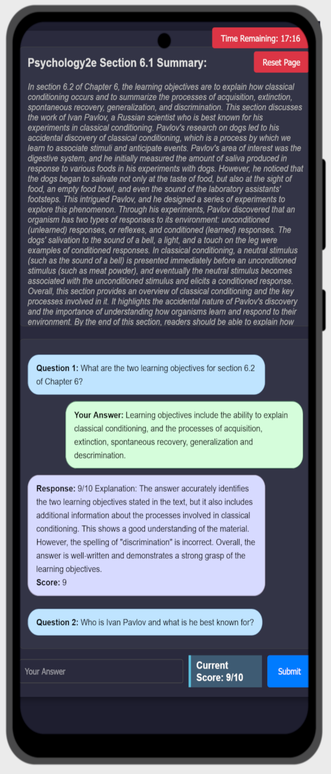
Oregon State University

G. A. R. Y.

Generative AI Reviewer for You

GARY in Action

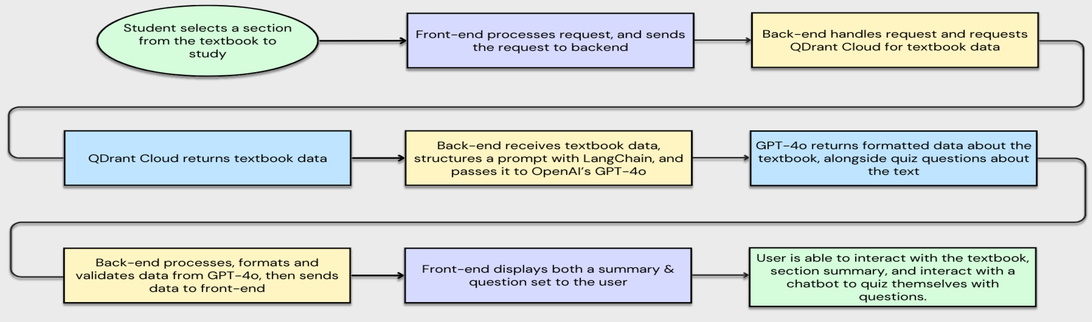
The image below shows GARY using AI to review a student's response. It scores the answer, provides personalized feedback, and generates a follow-up question to encourage deeper thinking and reflection.



Tools & Tech Stack

- **Frontend:** React, HTML/CSS
- **Backend:** Python, FastAPI, LangChain
- **Database:** Qdrant for vector storage
- **Model:** OpenAI GPT-4
- **Infrastructure:** Docker, AWS EC2
- **Version Control & Collaboration:** GitHub, JIRA
- **Additional Features:** RAG (Retrieval-Augmented Generation) for pulling real academic sources into prompts

GARY's Review Process



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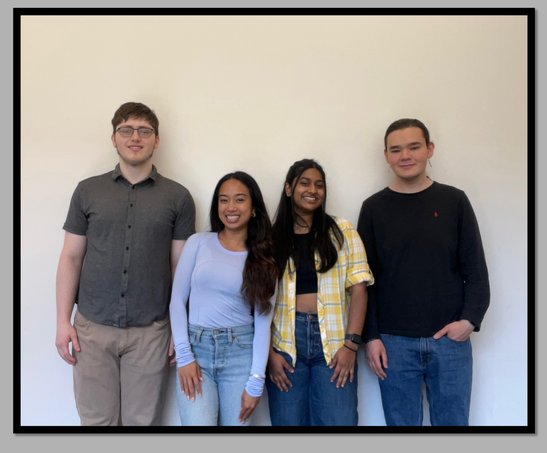

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