

MICHIGAN STATE

U N I V E R S I T Y

Project Plan Presentation

AI for Med Students Learning About Basket Management

The Capstone Experience

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*From Students...
...to Professionals*

Project Sponsor Overview

- Created by a merge of Spectrum & Beaumont Hospitals
- 22 Hospitals with over 65,000 Employees
- Working with Dr. Holman and MSU Medical Students



Project Functional Specifications

- Patients can communicate with doctors directly
- Students have a lack of education in basket management
- Train students to use EHRs and efficiently respond to patient messages
- Use AI to generate questions based on patient data and give feedback to responses



Project Design Specifications

- Simulated EHR Interface: An interactive interface resembling real-world EHR systems
- Task-Based Training: Students will manage test results, prescriptions, and patient messages
- AI-Powered Responses: Utilizing OpenAI's LLM API to craft an optimized response for reference
- Secure Authentication: Ensures role based access for students and instructors



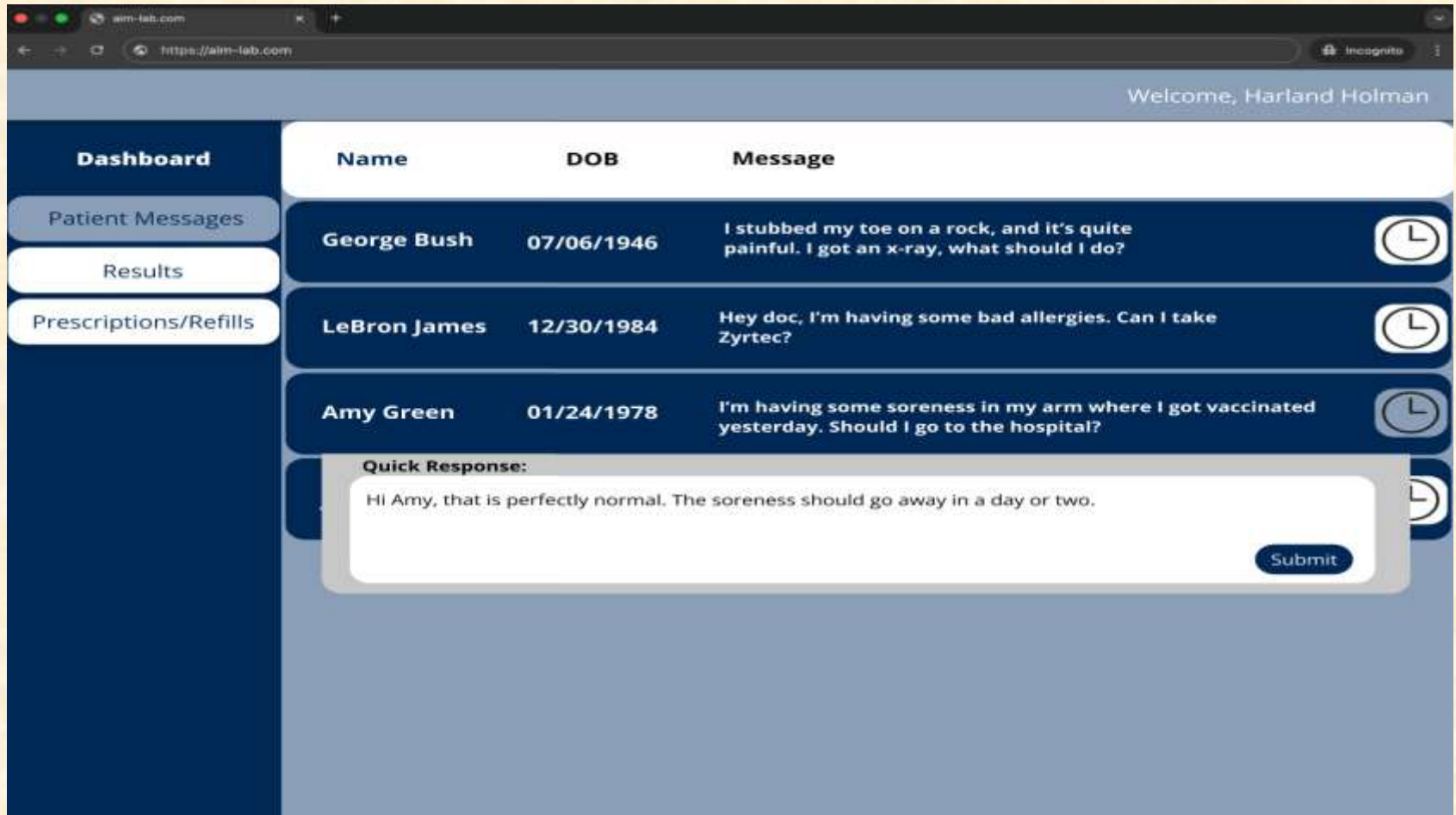
Screen Mockup: Lab View

Welcome, Harland Holman

Name	DOB	Lab Types	Abnormal Results	
George Bush	07/06/1946	Blood X-ray Urine	Yes	
LeBron James	12/30/1984	Lipid	No	
Amy Green	01/24/1978	Drug DEXA	No	
John Smith	09/13/2000	Thyroid	Yes	



Screen Mockup: Student Dashboard



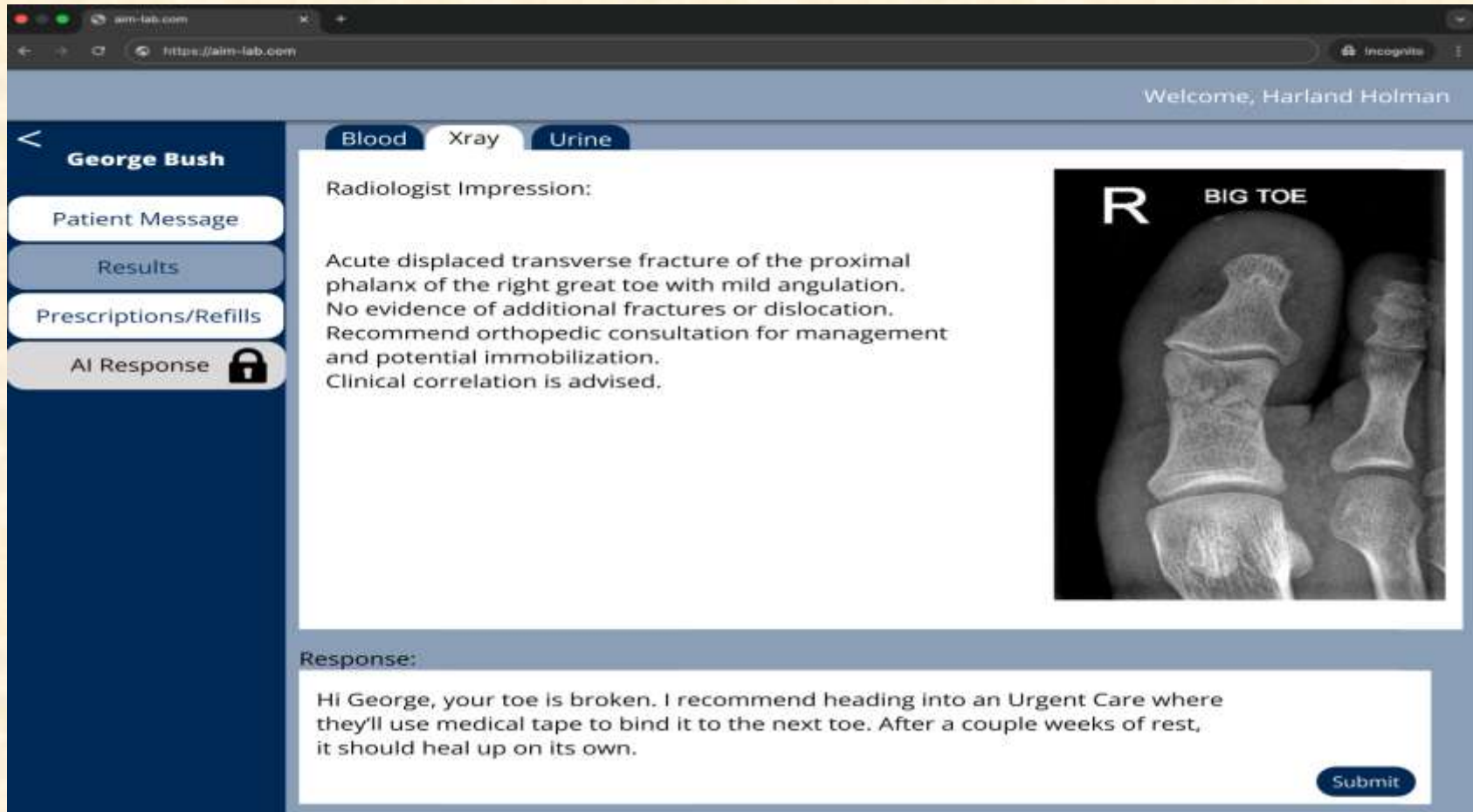
Screen Mockup: Prescription View

Welcome, Harland Holman

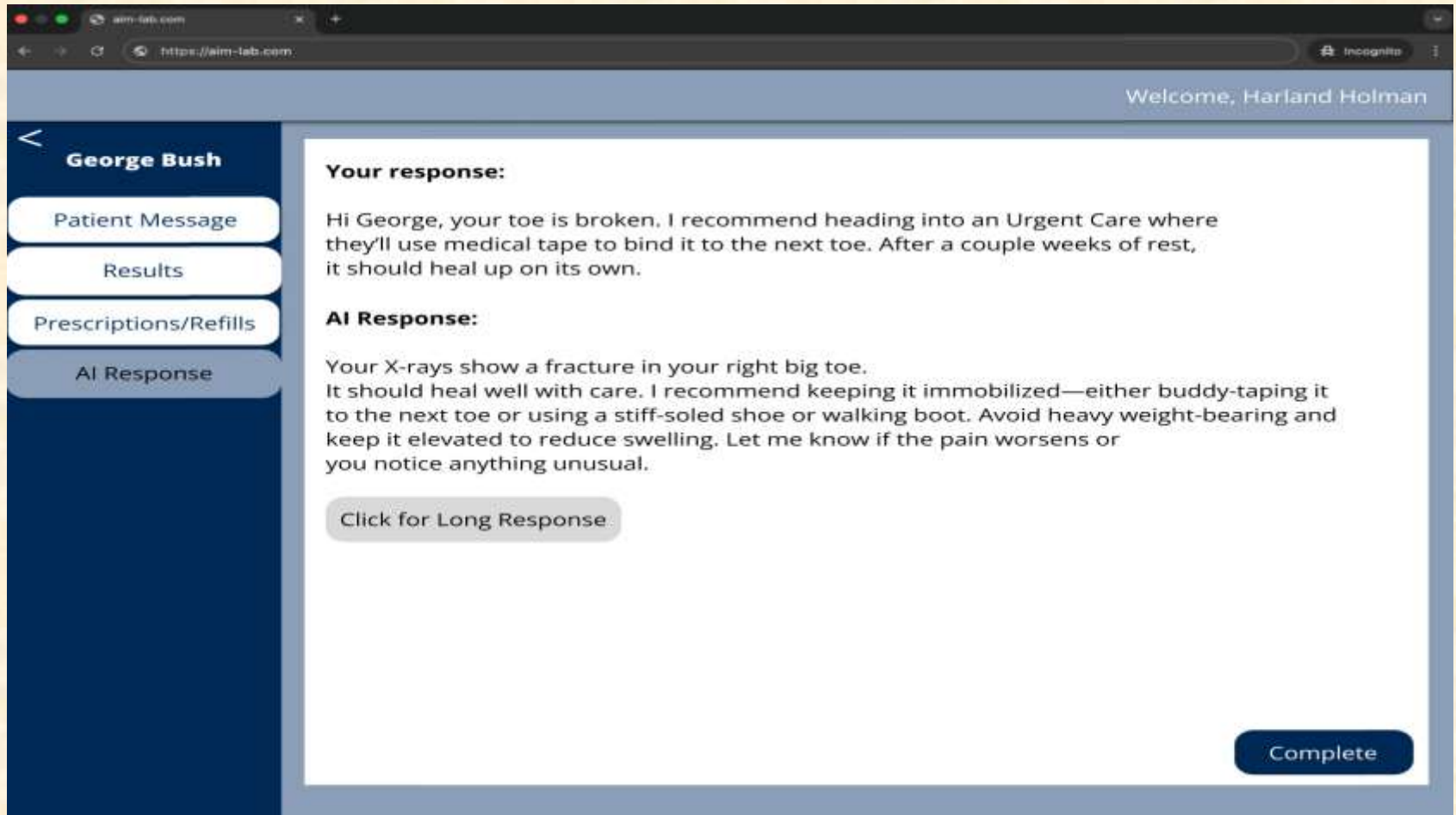
Name	DOB	Medication	Dose	Refill Status		
George Bush	07/06/1946	Atorvastatin	10 mg, once daily	5 days		
LeBron James	12/30/1984	Metformin	500 mg, twice daily	Completed		
Amy Green	01/24/1978	Lisinopri	20 mg, once daily	Pending		
John Smith	09/13/2000	Alprazolam	0.5 mg, as needed	Low Stock		



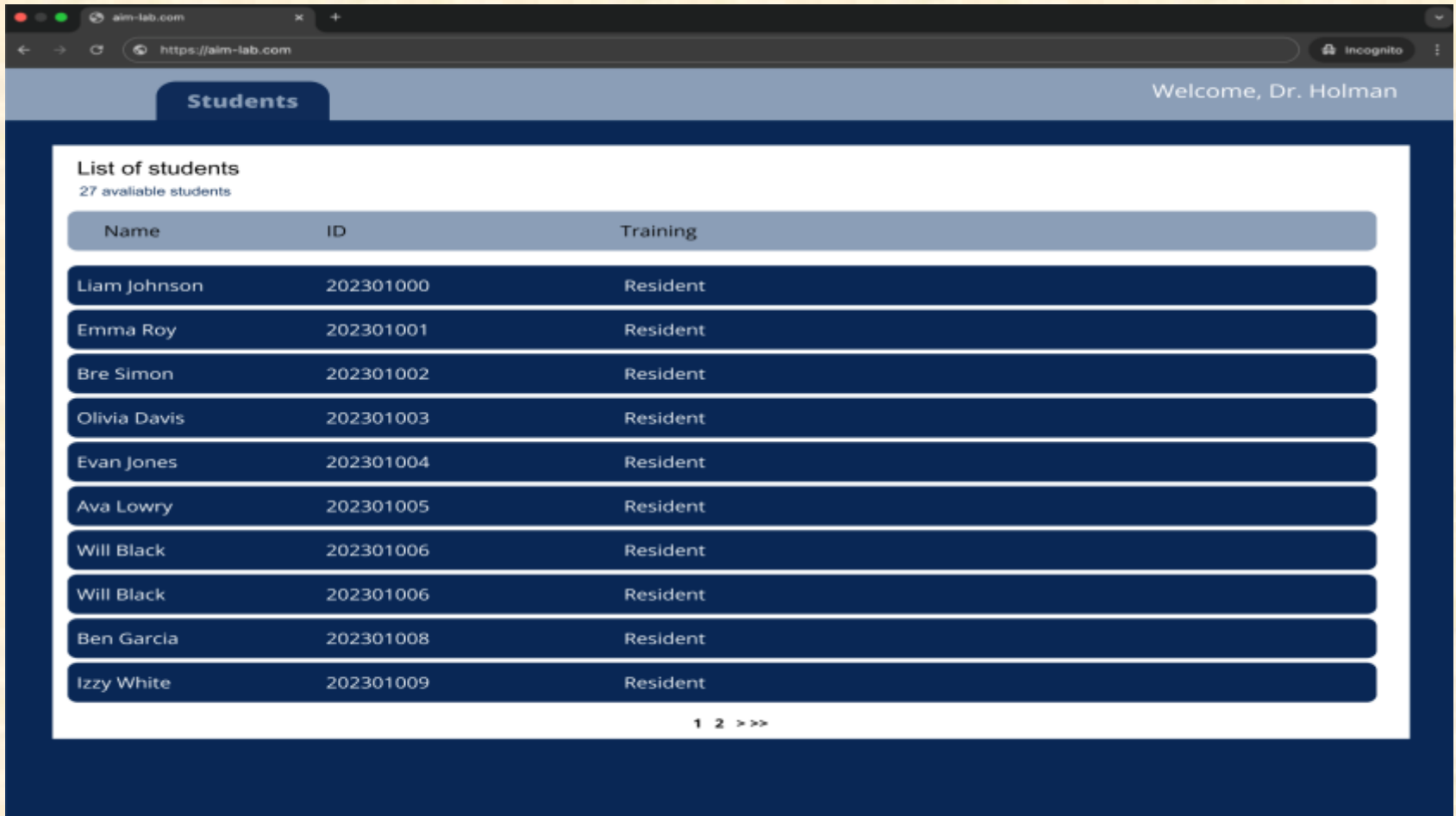
Screen Mockup: Lab Detail View



Screen Mockup: AI Response



Screen Mockup: Instructor Dashboard



The screenshot shows a web browser window with the URL <https://aim-lab.com>. The page title is "Students" and the user is logged in as "Welcome, Dr. Holman". The main content area is titled "List of students" and indicates "27 available students". Below this is a table with three columns: "Name", "ID", and "Training". The table lists ten students, all of whom are "Resident". At the bottom of the table, there is a pagination control showing "1 2 >>>".

Name	ID	Training
Liam Johnson	202301000	Resident
Emma Roy	202301001	Resident
Bre Simon	202301002	Resident
Olivia Davis	202301003	Resident
Evan Jones	202301004	Resident
Ava Lowry	202301005	Resident
Will Black	202301006	Resident
Will Black	202301006	Resident
Ben Garcia	202301008	Resident
Izzy White	202301009	Resident



Screen Mockup: Student Detail View

The screenshot shows a web browser window with the URL <https://aim-lab.com>. The page has a dark blue header with a 'Students' tab and a welcome message 'Welcome, Dr. Holman'. The main content area displays the name 'Liam Johnson' and a table of assignment progress.

Assignment	Tasks Completed
Week 1	20/21
Week 2	21/21
Week 3	21/21
Week 4	21/21
Week 5	19/21

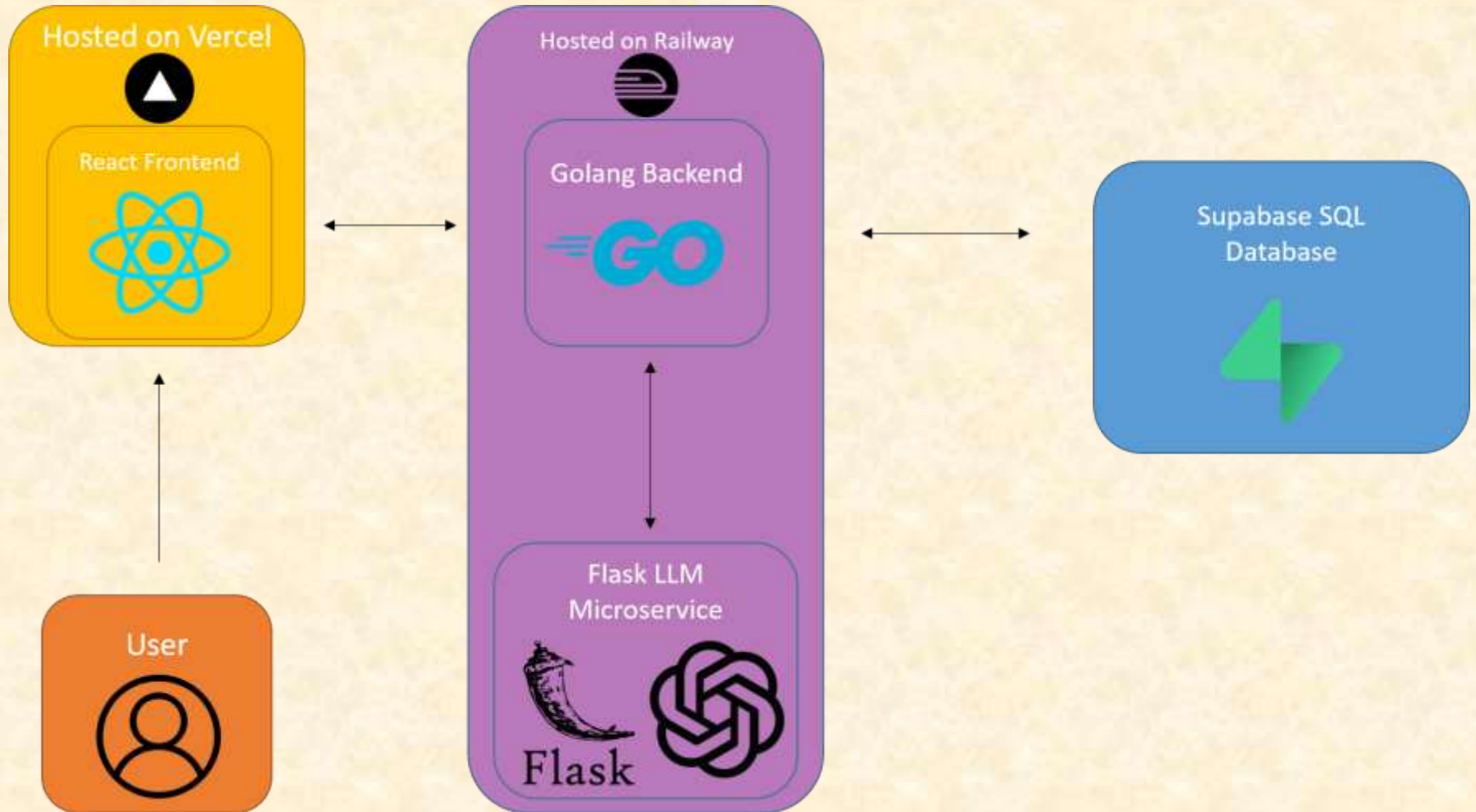


Project Technical Specifications

- Create a basket management system within an EHR application
- AI Element to give students reference on plan & assessments
- Create student & instructor views for task & grade analysis
- Order system for prescriptions & other medical needs



Project System Architecture



Project System Components

- Hardware Platforms
 - Not Applicable
- Software Platforms
 - Frontend: React.js
 - Backend: Golang & Flask
 - LLM: OpenAI
 - Database: Supabase



Project Risks

- Risk 1
 - Restricted access to MIMIC-III Database
 - Wait for access or use AI generated patient data
- Risk 2
 - Restricted access to Med-PaLM LLM
 - Use OpenAI LLM if no access
- Risk 3
 - Accurate LLM feedback for medical information
 - Retrain the LLM on approved feedback from sponsor
- Risk 4
 - Hosting on JIT Medicine website
 - Offer other hosting options & cost breakdowns



Questions?

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