



Alpha Presentation

An AI Tool for Enhancing Medical Education

The Capstone Experience

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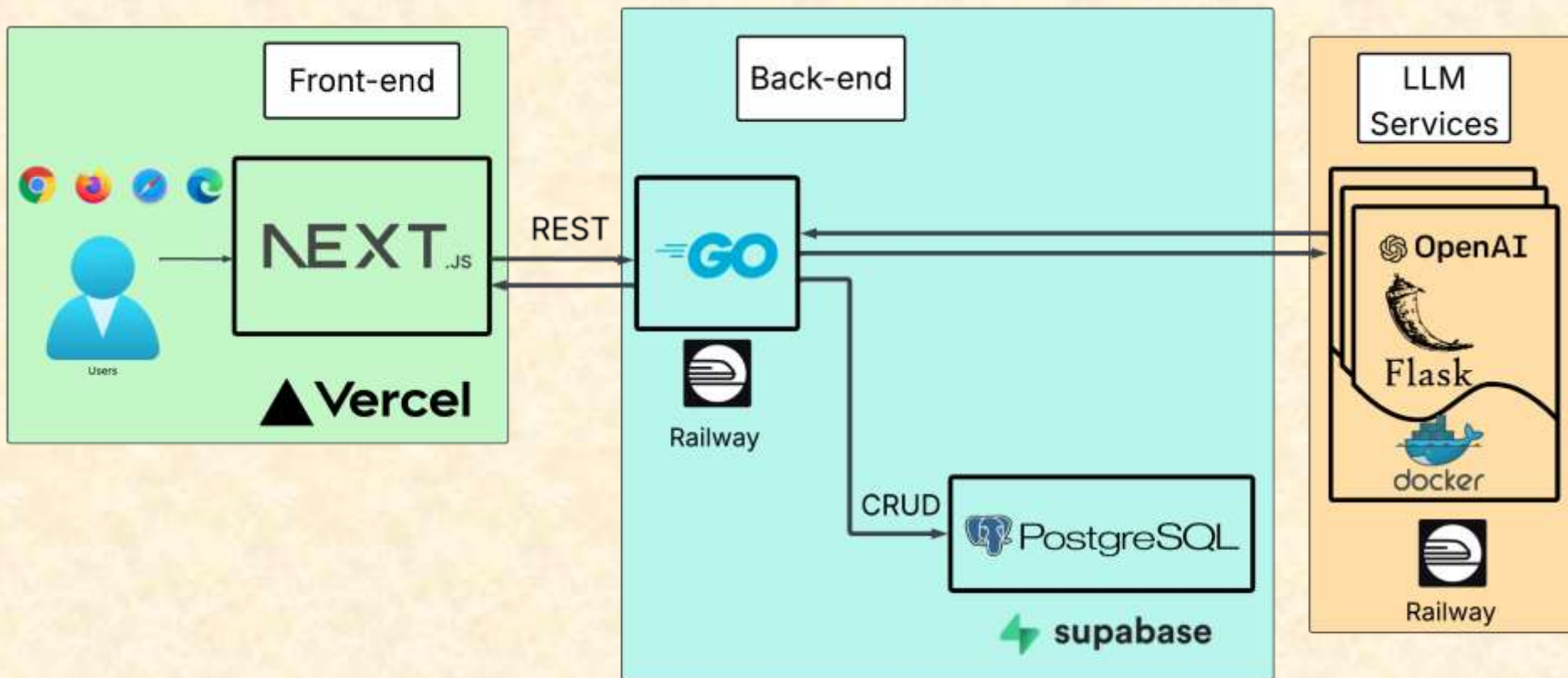


*From Students...
...to Professionals*

Project Overview

- Medical Students lack a realistic environment to practice responding to patient needs using Electronic Health Records (EHRs)
- An AI Tool for Enhancing Medical Education provides an interactive platform where students can respond to a variety of patient messages, order labs, refill prescriptions, and take practice medical licensing examinations
- Our future physicians will be more confident in using EHRs, and feel more proficient in their ability to provide accurate feedback within today's healthcare systems

System Architecture



Student Dashboard

The screenshot shows a web browser window with the URL `www.aimlab.com/StudentDashboard`. The page has a blue header with the text "Welcome back, Sabrina!" and "Ready to advance your medical knowledge today?". A stethoscope icon is in the top right corner. Below the header, there are five dark blue buttons with white text: "5 Patient Messages", "50 Lab Results", "35 Prescriptions", "1 Exam Practice", and "84 Completed Tasks". Below these buttons is a section titled "Patient Messages" with the subtitle "Unread messages from patients". On the right side of this section, there is a "Select Age Range:" dropdown menu with three options: "All" (selected), "Pediatric", and "Adult". Below the dropdown, there are two patient message cards. The first card is for "Oliver Adams, 1976-02-15" with a blue circle icon containing "OA" and a green "Adult" tag. The message text is "I experience significant knee pain after prolonged walking." and there is a "Quick Reply" button. The second card is for "Layla Patel, 1991-11-30" with a blue circle icon containing "LP" and a green "Adult" tag. The message text is "I need medication for sudden migraines." and there is a "Quick Reply" button.

5 Patient Messages

50 Lab Results

35 Prescriptions

1 Exam Practice

84 Completed Tasks

Patient Messages

Unread messages from patients

Select Age Range:
☒ All ☐ Pediatric ☐ Adult

OA **Oliver Adams, 1976-02-15**
I experience significant knee pain after prolonged walking.
Adult Quick Reply

LP **Layla Patel, 1991-11-30**
I need medication for sudden migraines.
Adult Quick Reply



Patient Details

The screenshot shows a web browser window with the URL `www.aimlab.com/PatientPage/a1b2c3d4-e5f6-4789-abc0-123456789abc?task_id=64819c89-b724-470c-87cf-ac9d34c0642f`. The page has a blue header with a "Back to Dashboard" button, the title "Patient Details" for "Sofia Martinez - DOB: 1993-07-15", and a "Logged in as Sabrina Lee" indicator. Below the header is a dark blue prompt box: "Should the Albuterol Inhaler prescription be refilled? Why or why not?". A navigation bar contains tabs for "General Info", "Results", "Prescriptions", "Orders/Referrals", "PDMP", and "AI Assistant". The "General Info" tab is active, showing a grid of patient information: Demographics (Date of Birth: 1993-07-15, Age: 32, Gender: Female), Problem List (Asthma), Allergies (None), Immunizations (COVID-19 Booster (2023-03-01), Influenza (2023-10-01)), Medical History, and Family Medical History. An AI Assistant sidebar on the right prompts the user to "Respond to the patient's needs with the information provided to receive feedback!".

← Back to Dashboard

Patient Details
Sofia Martinez - DOB: 1993-07-15

Logged in as
Sabrina Lee

Should the Albuterol Inhaler prescription be refilled? Why or why not?

General Info Results Prescriptions Orders/Referrals PDMP AI Assistant

General Info

Demographics
Date of Birth: 1993-07-15 (Age: 32)
Gender: Female

Problem List
Asthma

Allergies
None

Immunizations
COVID-19 Booster (2023-03-01)
Influenza (2023-10-01)

Medical History

Family Medical History

Respond to the patient's needs with the information provided to receive feedback!



Exam Page

The screenshot displays a web browser window with the URL `www.simlab.com:3000/QuizPage/45`. The page has a blue header with a "Back to Dashboard" button, the "USMLE Practice" title, and a login status for "Sabrina Lee". Below the header, a progress bar shows 8 out of 8 questions completed. The main content area features a "USMLE Step 2 Practice Question" about a 28-year-old man with erectile dysfunction. Four multiple-choice options are provided, and a "Submit" button is at the bottom right. On the right side, an "AI Assistant" panel is visible, displaying the message "Hello, I'm here for explanation."

← Back to Dashboard

USMLE Practice

Logged in as Sabrina Lee

USMLE Step 2 Practice Question

A 28-year-old man presents to the outpatient clinic with complaints of a 3-week history of new-onset erectile dysfunction (ED) and decreased libido. He reports that he has been under significant stress due to a recent job loss and family issues. He denies any history of substance abuse, and he is not taking any medications. His past medical history is unremarkable, and he exercises regularly. He does not smoke and consumes alcohol socially. On physical examination, vital signs are stable, and there are no abnormalities noted in the genital examination. Laboratory studies reveal normal testosterone levels, and a lipid panel shows mild hyperlipidemia. Which of the following is the most appropriate initial management for this patient?

☐ A. Counseling on lifestyle modifications

☐ B. Referral to a urologist

☐ C. Prescribing PDE5 inhibitors

☐ D. Hormone therapy with testosterone replacement

Submit

AI Assistant

Hello, I'm here for explanation.



Student Profile

Aim-Lab Corewell Health

www.aimab.com3000/ProfilePage

← Back to Dashboard

Student Profile

Logged in as Sabrina Lee

My Profile

Name:	Rotation:	Areas Of Improvement:	Display Preference:	Profile Picture:
Sabrina Lee	pediatrics	Pediatric Cases × Musculoskeletal × +	dark mode light mode	
				Change Profile Picture
				Logout Cancel Save Changes



What's left to do?

- Categorizing exam questions into specialized topics using existing tagging feature
- Restructuring storage of user data to comply with FERPA guidelines
- Finalize client-requested user interface changes
- Deploying the application to web services for student beta testing



Questions?

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