

MICHIGAN STATE
UNIVERSITY

Project Plan Presentation

TEAM PACE

The Capstone Experience

Team PACE

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From Students...
...to Professionals

Fall 2025

Project Sponsor Overview



AI Services & Vendor Overview

- Originated in San Francisco in 1971
- A government-funded program of all-inclusive care for the elderly in Michigan aged 55 and older
- Includes medical and specialty services for participants from their homes and in the PACE centers
- Coordinates services provided from outside vendors or facilities



Project Functional Specifications

- Problem: PACE handles a lot of staff inquiries about vendor information, creating a bottleneck impacting participant care quality
- Solution: A mobile/web application powered by AI to quickly help employees get the information they need based on their role and inputs provided



Project Design Specifications

- Centralized Vendor Database
 - Searchable
- AI Chatbot Interface
- Administrative Tools
 - User Management
 - Vendor Data Management

Screen Mockup: Search Page

The screen mockup shows a web browser window with the URL `services.pacesemi.org`. The page header includes the PACE logo, the title "Services & Vendor Navigator", and three navigation buttons: "SEARCH" (green), "AI SEARCH" (pink), and "EXPLORE" (blue). A user profile icon is in the top right corner.

The main content area features a search sidebar on the left and a grid of results on the right. The sidebar contains four input fields: "Search *" (with a placeholder "Value"), "Location" (with a placeholder "Value"), "Specialty" (with a placeholder "Value"), and "Maximum Distance" (with a placeholder "Value"). A "Submit" button is at the bottom of the sidebar.

The results grid displays six items, each with a name and an information icon (i):

- Eastpointe Dialysis Center
- Fairlane Dialysis
- Home Dialysis Specialty Center
- Macomb Regional Dialysis Center
- Michigan Metropolitan Dialysis
- Northwest Detroit Dialysis

At the top right of the results grid, there are three tabs: "A-Z" (selected), "Location", and "Cost".



Screen Mockup: Vendor Details

The screen mockup displays the 'Services & Vendor Navigator' website. The browser address bar shows 'services.pacesemi.org'. The website header includes the PACE logo, the title 'Services & Vendor Navigator', and navigation buttons for 'SEARCH', 'AI SEARCH', and 'EXPLORE'. A user profile icon is in the top right. On the left, there are search filters for 'Search *', 'Location', 'Specialty', and 'Maximum Distance', each with a 'Value' input field and a 'Submit' button. A modal window is open, displaying details for 'Eastpointe Dialysis Center'. The modal includes the following information: Physical Address: 21400 Kelly Road, Eastpointe, MI 48021; Remittance Address: 30100 TELEGRAPH RD SUITE 200, BINGHAM FARMS, MI 48025-4516; Phone: (586) 779-8779; Fax: (586) 779-8153; Tax ID: 38-1357020; and NPI: 1093735482. A green 'Close' button is at the bottom of the modal. In the background, a list of dialysis services is visible, including 'Dialysis', 'Regional Dialysis', and 'West Detroit Dialysis', each with an information icon.

Service & Vendor Navigator

services.pacesemi.org

SEARCH AI SEARCH EXPLORE

Search *

Value

Location

Value

Specialty

Value

Maximum Distance

Value

Submit

Eastpointe Dialysis Center

Physical Address: 21400 Kelly Road, Eastpointe, MI 48021
Remittance Address: 30100 TELEGRAPH RD SUITE 200, BINGHAM FARMS, MI 48025-4516
Phone: (586) 779-8779
Fax: (586) 779-8153
Tax ID: 38-1357020
NPI: 1093735482

Close

✓ A-Z Location Cost

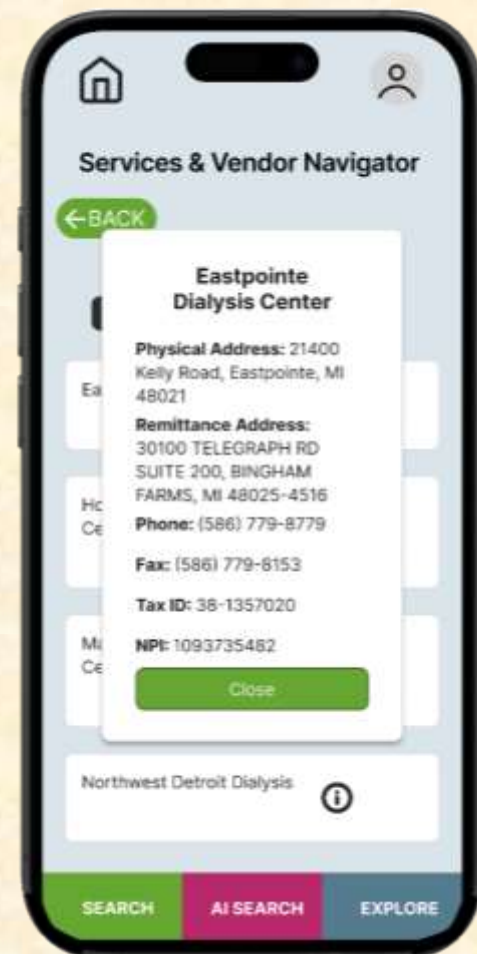
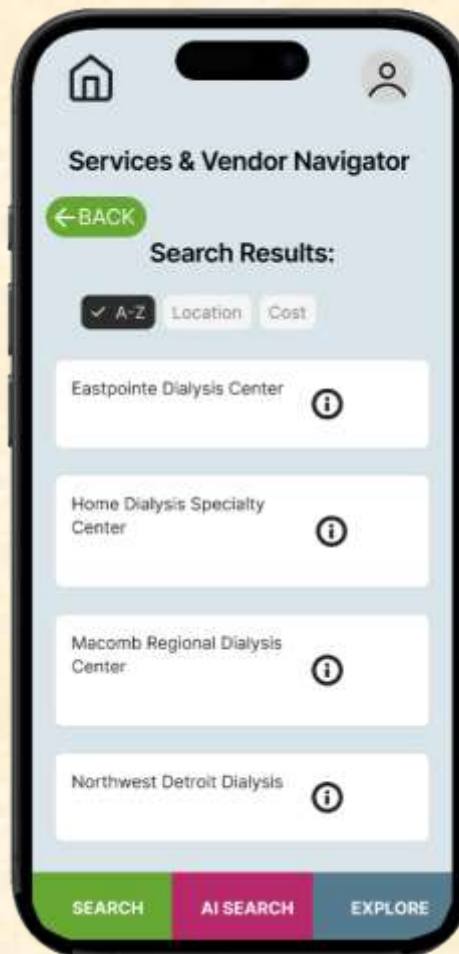
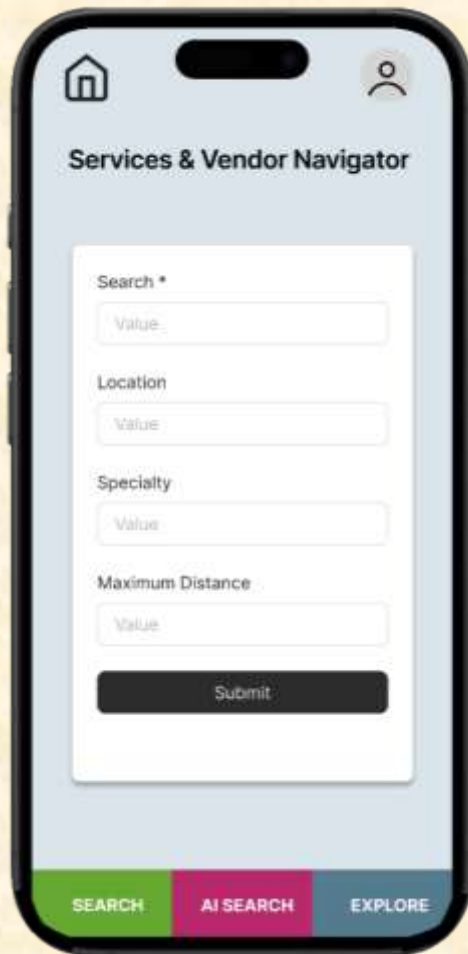
Dialysis ⓘ

Regional Dialysis ⓘ

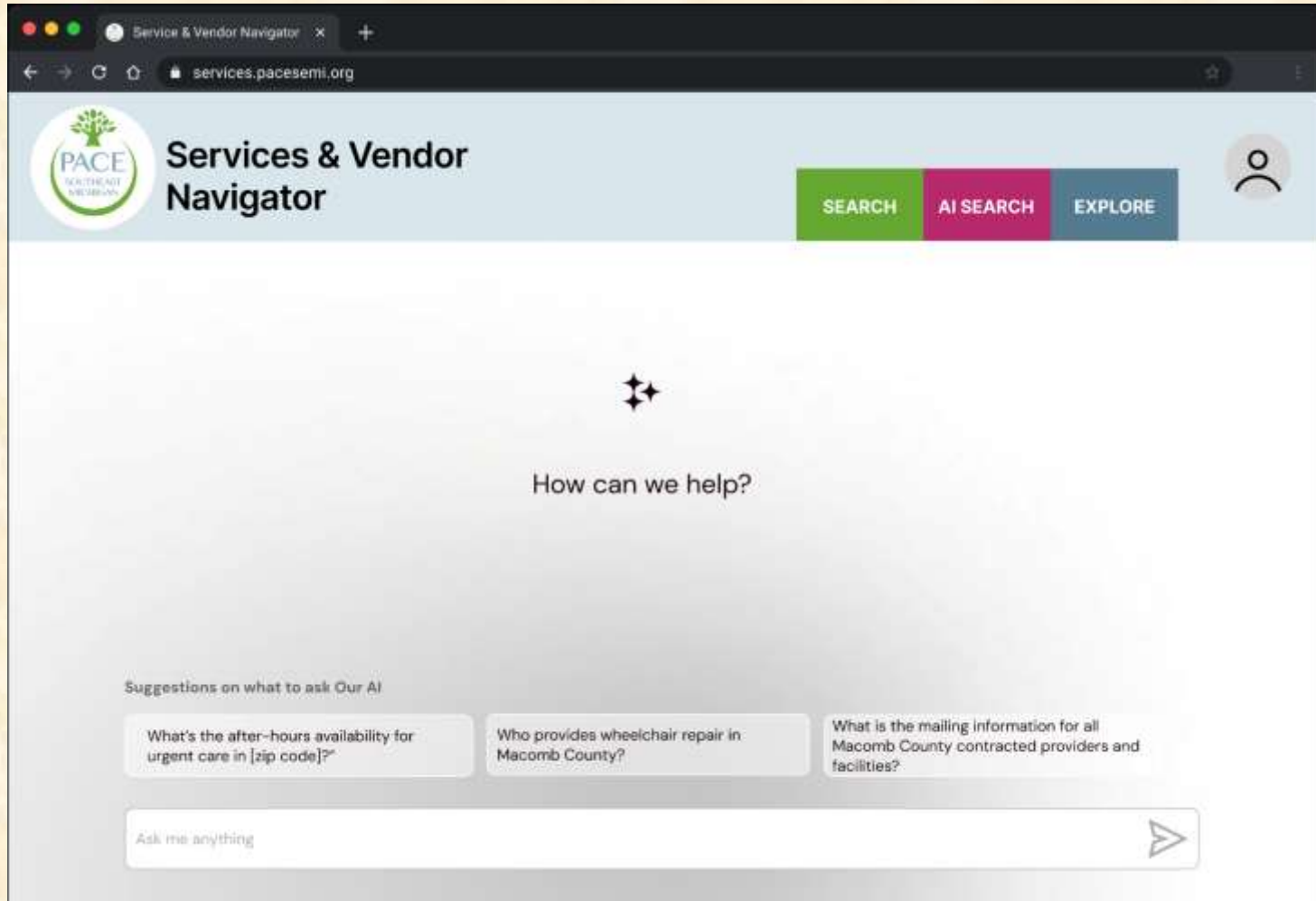
West Detroit Dialysis ⓘ



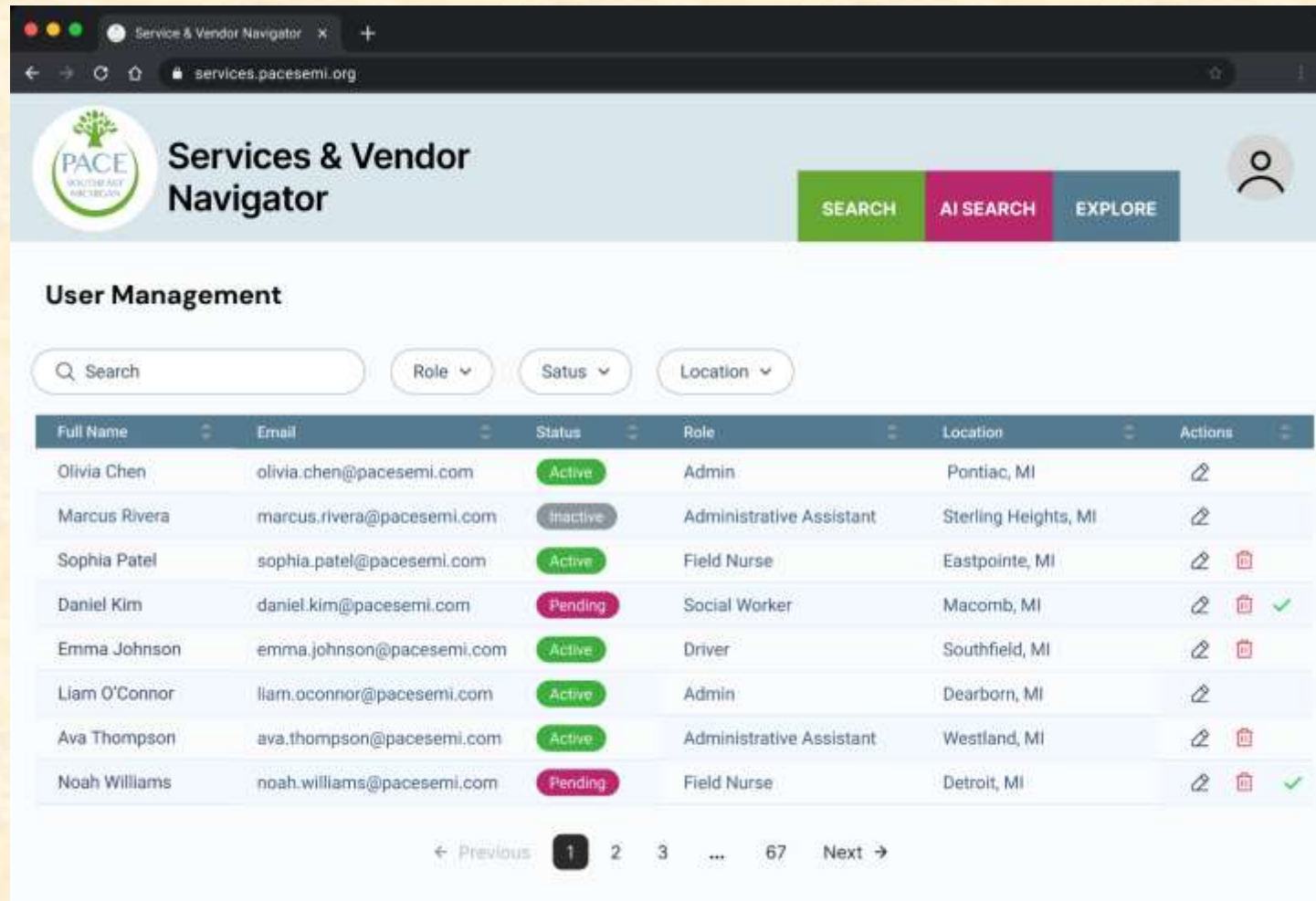
Screen Mockup: Mobile Search



Screen Mockup: Chatbot Interface



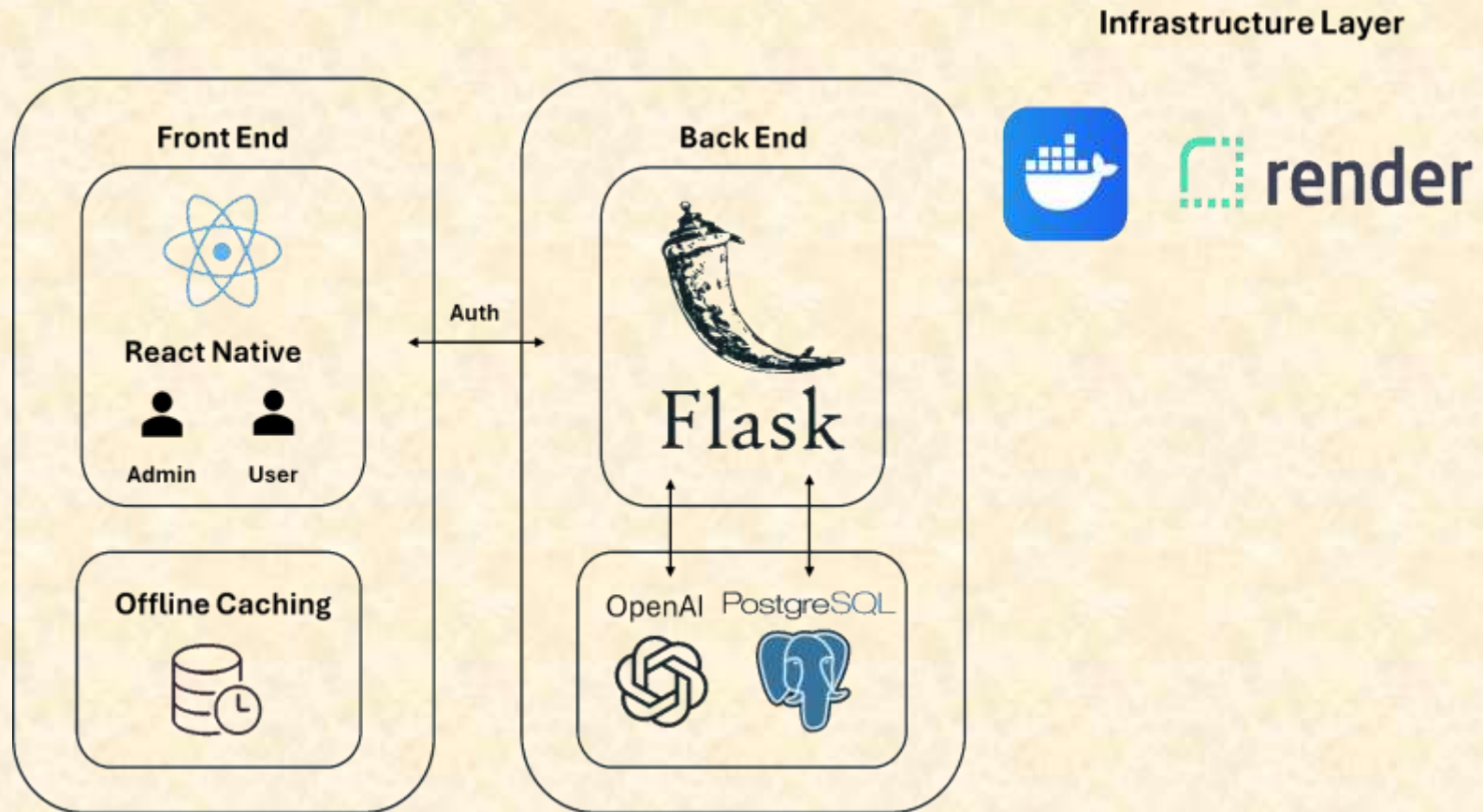
Screen Mockup: User Management



Project Technical Specifications

- Cross Platform Front End
- REST API Endpoints
- Authentication, Database Search, AI Search
- Offline Mode
- Containerized Hosting
- Cloud Hosting

Project System Architecture



Project System Components

- Software Platforms / Technologies
- React Native
- Flask
- PostgreSQL
- OpenAI
- Docker
- Render



Project Risks

- Risk 1 : Cross–Platform Development
 - Using React Native for IOS and web introduces challenges such as security, compatibility, debugging and third-party library dependency
 - Implement error tracking to catch and debug cross platform bugs early
- Risk 2: Data Quality Issues
 - Data is scattered, duplicated or missing and vendor info can change
 - Build data validation layer before inserting entries into our database
- Risk 3: NLP Layer Misinterpretation
 - The NLP layer (OpenAI) could misinterpret queries or hallucinate answers
 - Use guardrails to limit scope of queries and intent validation
- Risk 4: Authentication Dependency
 - Authentication uses Henry Ford servers which we do not have access to
 - Work with IT team to establish formal integration agreement



Questions?

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