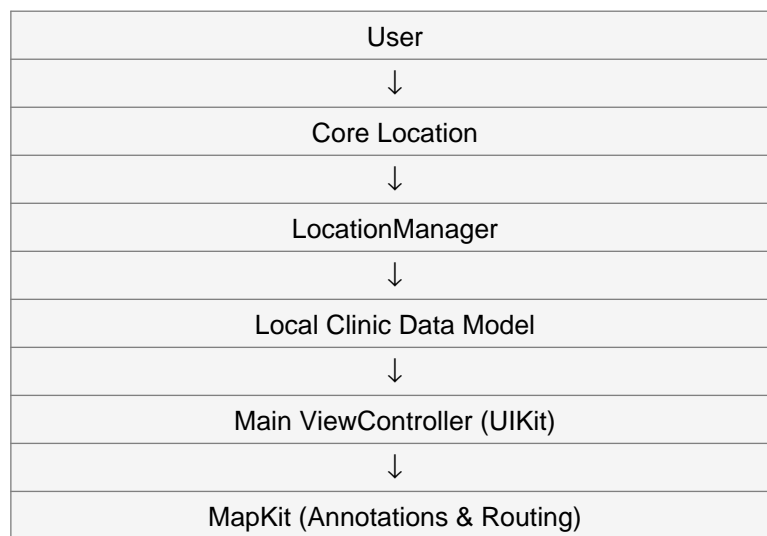# COVID-19 Vaccination Locator App (iOS)

## Architecture Model

The application follows a UIKit-based MVC architecture. User location is retrieved via Core Location, processed through a LocationManager component, compared against a locally structured clinic data model, and rendered dynamically within the main ViewController. MapKit is used for map visualization and routing.

## System Data Flow

| User |
| :---: |
| ↓ |
| Core Location |
| ↓ |
| LocationManager |
| ↓ |
| Local Clinic Data Model |
| ↓ |
| Main ViewController (UIKit) |
| ↓ |
| MapKit (Annotations & Routing) |

## Core Components

- LocationManager – Handles GPS retrieval and permission management using Core Location.
- Clinic Data Model – Stores structured local clinic information (name, coordinates, metadata).
- Main ViewController – Manages UI rendering and dynamic clinic display.
- MapKit Integration – Displays map annotations and generates in-app routing.