

Access Share

Connecting People with Healthcare
Resources and Assistive Devices

Mentored by:

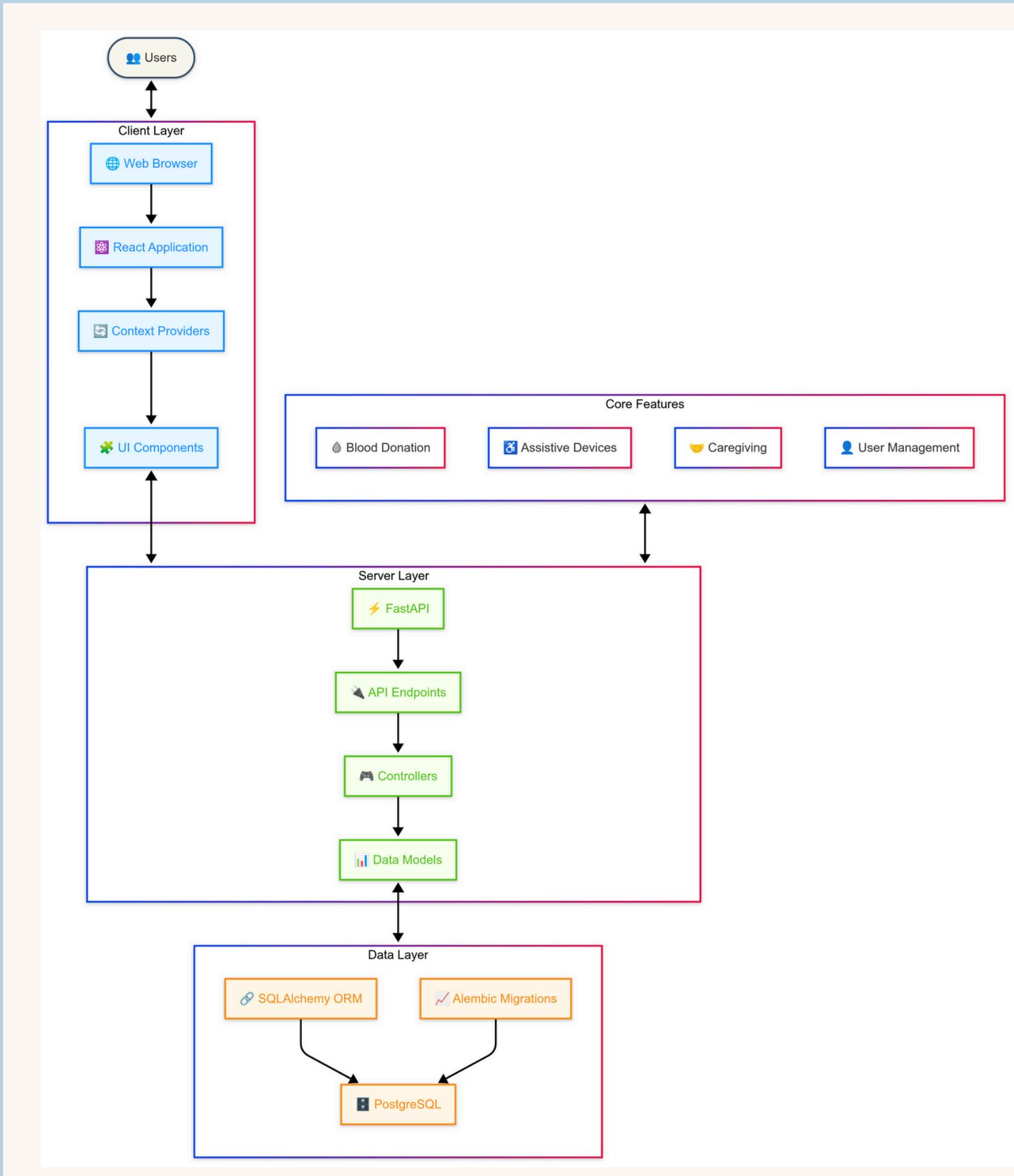
Ekta Tyagi

Presented by:

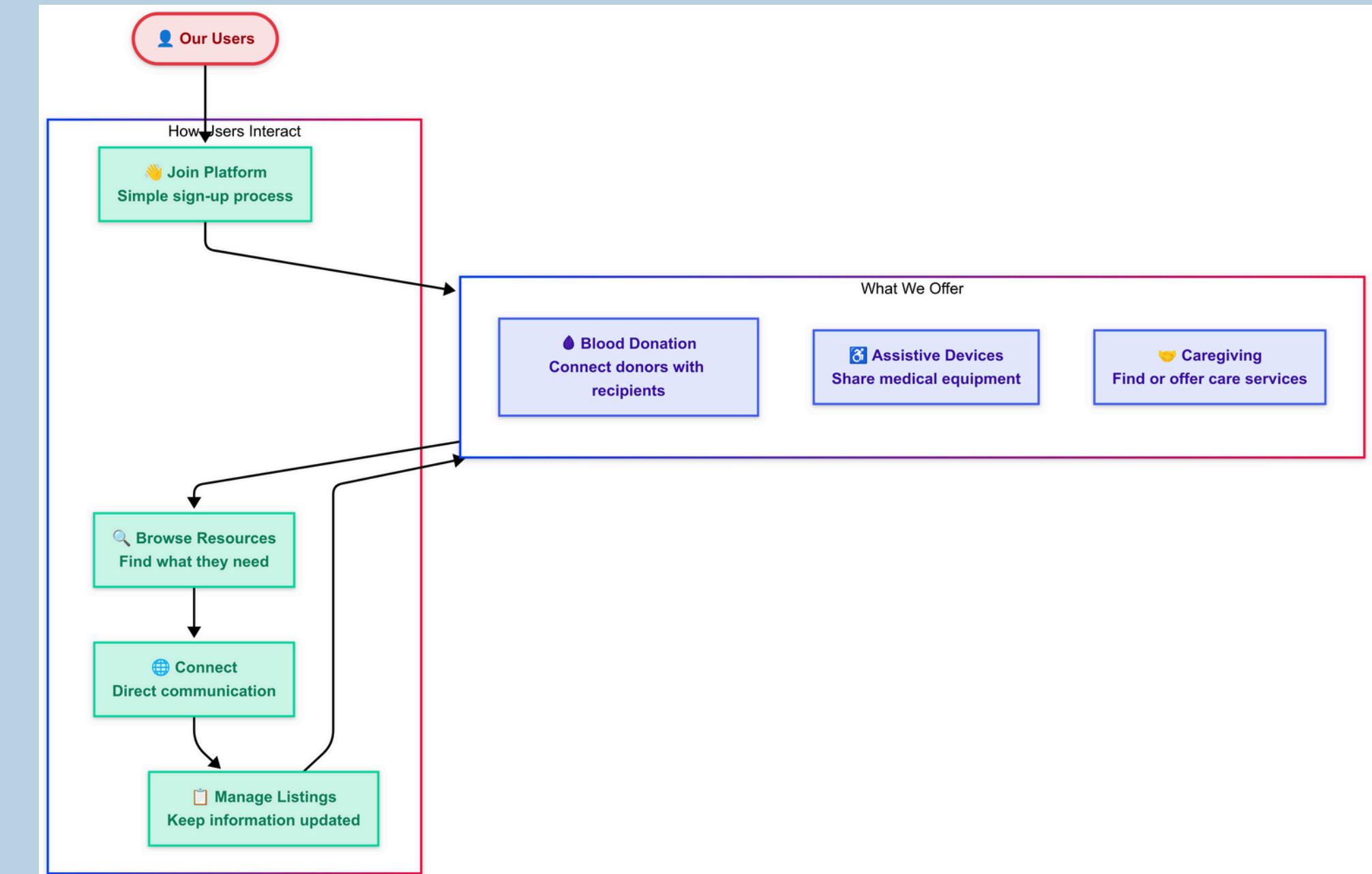
Aayushi Kumari
Likitha Konam
Banothu Sruthilaya
Vatista Kachroo



System Architecture



UX Flow



Create your account

Join our community

Email address *

Username *

Password *

Password strength: medium (Add more variety to make it stronger)

Create account

Already have an account? [Sign in instead](#)

AccessShare Blood Donation Assistive Devices Caregivers Help ▾ Likitha ▾

Empowering Communities Through Accessible Healthcare

Join our platform to connect with donors, caregivers, and healthcare resources in your community.

[Find Resources](#)
[Donate Now](#)

OUR SERVICES

How would you like to help?

Choose to donate, receive, or explore all our services

Blood Donation
 Connect with blood donors or request blood donations
[Donate Blood](#)
[Request Blood](#)

Assistive Devices
 Connect with donors offering mobility aids, hearing devices, and more
[Donate Devices](#)
[Request Devices](#)

Caregivers
 Connect with experienced caregivers or offer your services
[Offer Care](#)
[Find Caregivers](#)

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ASSISTIVE DEVICES

Donate Devices

Donate medical equipment and assistive devices to those in need

Donate a Device

Fill out this form to donate your assistive device to someone in need.

Device Name

Condition

Location

Contact Information

Description
Gently used wheelchair in excellent condition. Foldable, lightweight, and easy to transport. Ideal for both indoor and outdoor use.

Device Type

Condition

Location

Contact Information

Description
Gently used wheelchair in excellent condition. Foldable, lightweight, and easy to transport. Ideal for both indoor and outdoor use.

[Submit Donation](#)

AccessShare Blood Donation Assistive Devices **Caregivers** Help ▾ Aayushi ▾

Find Caregivers

Find caregivers that match your requirements

Filter Caregivers

Service Type	Experience Level	Location	Search	Availability
All Service T	All Experience	Any location	<input type="text"/>	All Statuses

Medical Care
 Available
 Delhi
 Experience: Entry Level (0-2 years)
 Rate: \$15/hour
 Contact: 9876543210
 Dedicated entry-level medical caregiver trained in basic health monitoring and medication support, committed to providing safe and attentive care in Delhi.
[Contact Caregiver](#)

Medical Care
 Available
 Bangalore
 Experience: Intermediate (2-5 years)
 Rate: \$15/hour
 Contact: 8673868476
 Experienced and compassionate medical caregiver with 3+ years of hands-on practice in basic medical support, medication management, and patient monitoring in Bangalore.
[Contact Caregiver](#)

Personal Care
 Available
 Delhi
 Experience: Expert (10+ years)
 Rate: \$22/hour
 Contact: 6543967465
 Expert personal care provider with over 10 years of experience delivering respectful, reliable assistance with daily routines, hygiene, and mobility support in Delhi.
[Contact Caregiver](#)

Emotional Support
 Temporarily Unavailable
 Hyderabad
 Experience: Expert (10+ years)
 Rate: \$10/hour
 Contact: 9876543210
 Dedicated emotional support caregiver providing psychological counseling and crisis intervention services in Hyderabad.
[Contact Caregiver](#)

Personal Care
 Limited Availability
 Chennai
 Experience: Intermediate (2-5 years)
 Rate: \$20/hour
 Contact: 8673868476
 Experienced personal care provider with intermediate skills in basic medical support, medication management, and patient monitoring in Chennai.
[Contact Caregiver](#)

Transportation
 Booked
 Hyderabad
 Experience: Entry Level (0-2 years)
 Rate: \$4/hour
 Contact: 7654321098
 Reliable transportation service provider available for short-distance trips in Hyderabad.
[Contact Caregiver](#)

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Profile Information

Your personal information.

User

Manage your personal information

Username	Email
Likitha	konamlikitha@gmail.com

Phone Number

Not provided

My Donations

View and manage your donations and listings.

Assistive Devices

My Assistive Device Listings

Device Name	Type	Condition	Status	Actions
Wheelchair	wheelchair	like_new	available	<div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input checked="" type="checkbox"/> Available </div> <div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input type="checkbox"/> Pending </div> <div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input type="checkbox"/> Reserved </div> <div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input type="checkbox"/> On Hold </div> <div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input type="checkbox"/> Taken </div> <div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input type="checkbox"/> Maintenance </div> <div style="border: 1px solid #ccc; padding: 2px 5px; border-radius: 5px; display: inline-block;"> <input type="checkbox"/> Inactive </div>

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Account Settings

Manage your account information and profile details.

Email Address

Username

Full Name

Phone Number

[Save Changes](#)

Password & Security

Update your password and manage security settings.

Current Password

New Password

Confirm New Password

[Change Password](#)

Delete Account

This action is irreversible and will permanently delete your account.

Warning

Deleting your account will remove all your personal information, donations, and history from our system. This action cannot be undone.

[Delete My Account](#)

Frontend

Building the User Experience



Frontend Architecture

Our Approach:

- **Technology Choice:**

- React & TypeScript: For a modern, reliable user interface.

- **Structural Design:**

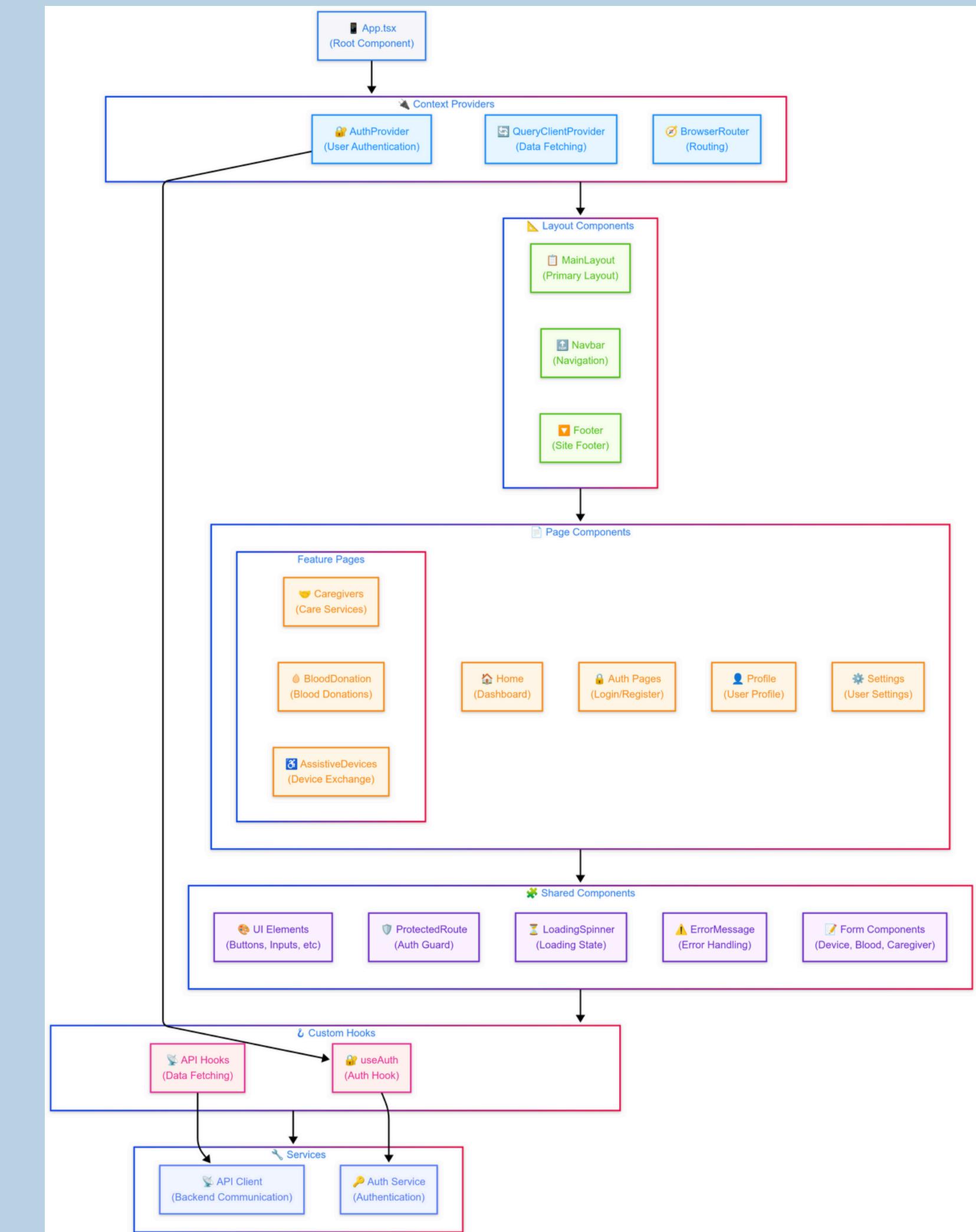
- Layered Architecture: Separates UI, data, and logic cleanly. (See Diagram)
- Modular Features: Distinct sections for Blood, Devices, and Caregivers.

- **User Experience Focus:**

- Consistent Design: Shared components ensure a unified look and feel.
- Responsive Layouts: Works seamlessly on desktop and mobile.
- Secure Access: Manages user login and protects private areas.

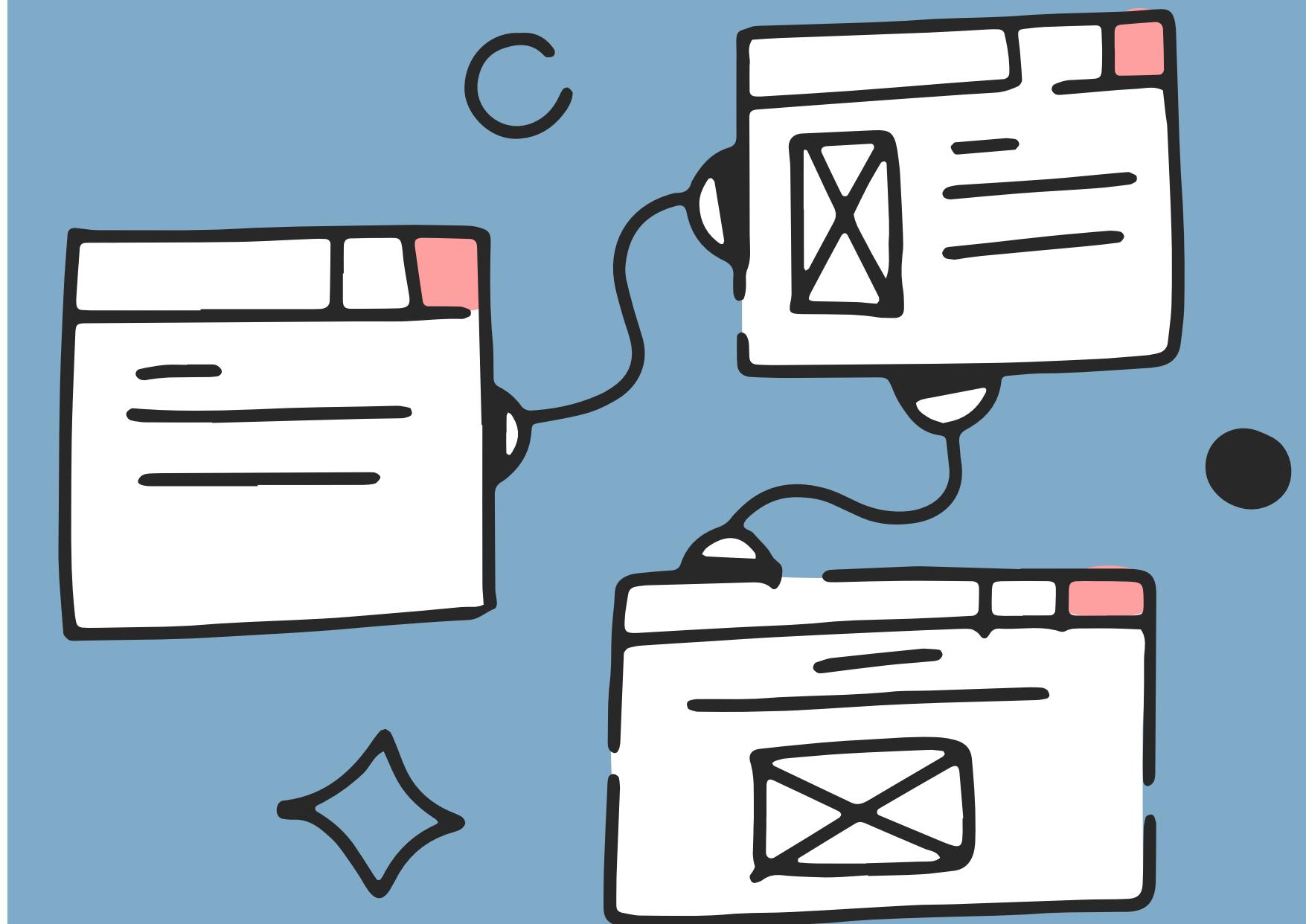
- **Data Handling:**

- Efficient Updates: Keeps information current without constant reloading.
- Smooth Backend Connection: Reliable communication with the server.



Backend

Powering the Platform



Managing Our Data: Tools & Process

1. Storage Foundation:

- Technology: PostgreSQL Database
- Reason: Chosen for stability and robust relational data handling.

2. Code-to-Database Link:

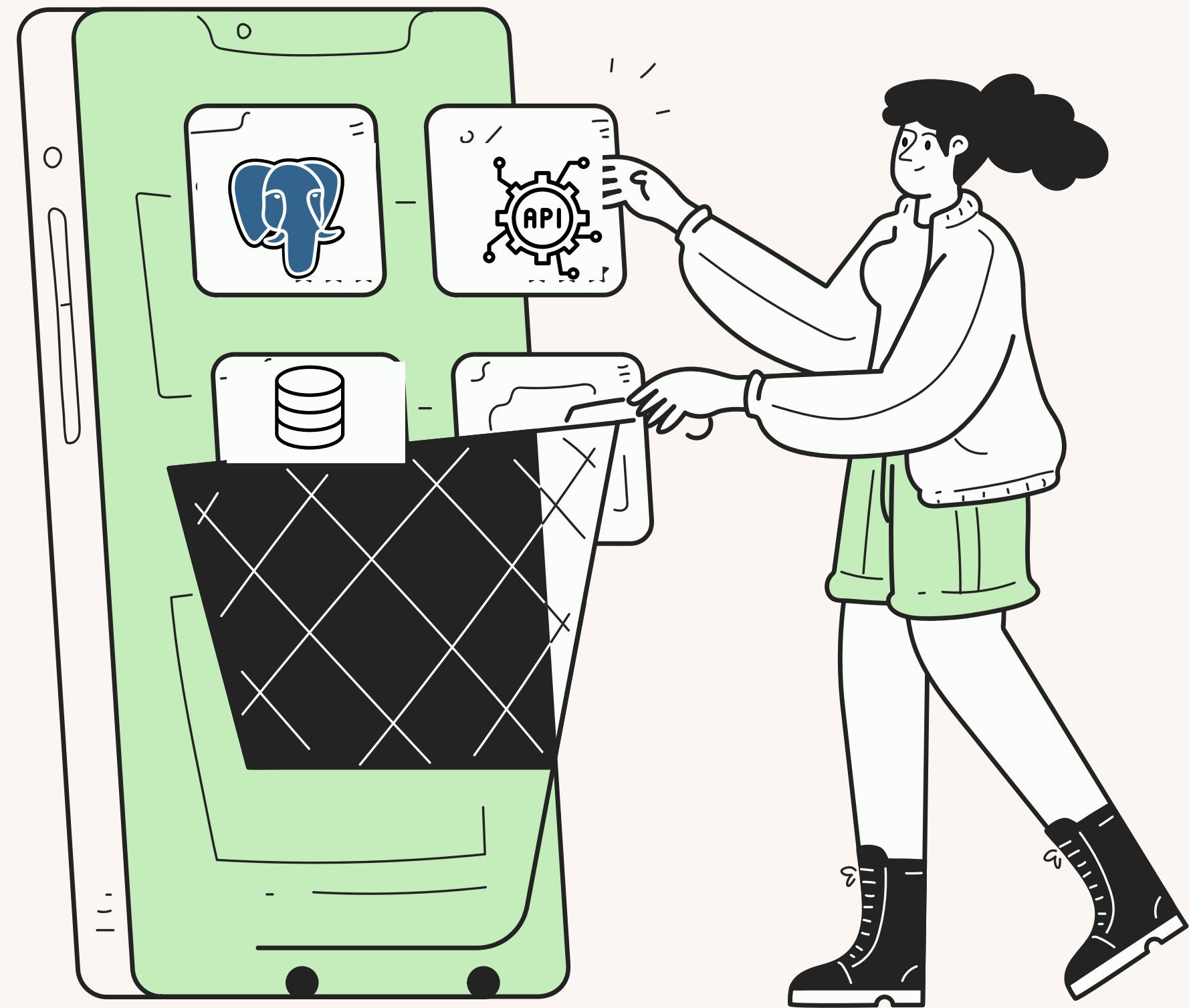
- Technology: SQLAlchemy ORM
- Function: Translates Python code (our Models) into database operations, simplifying data access.

3. Database Evolution:

- Technology: Alembic Migrations
- Function: Manages changes to the database structure safely as the application grows, keeping it synchronized with the code.

4. Ensuring Smooth Operations:

- Mechanism: SQLAlchemy Sessions & FastAPI Dependency Injection
- Function: Provides clean, reliable database connections for every user request and manages data transactions.



Database Blueprint

Core Entities:

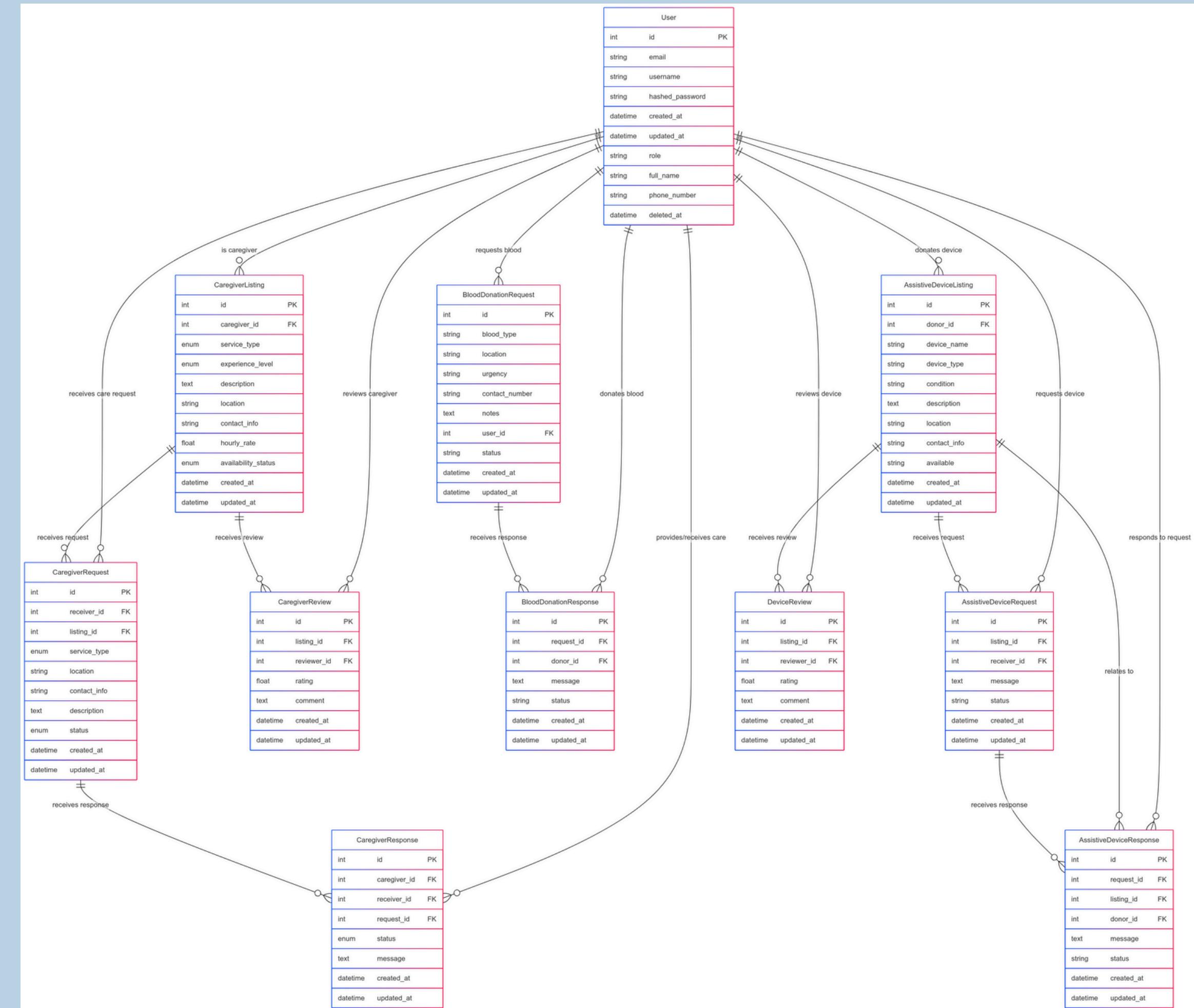
- 👤 User: The central point, connecting all interactions.
- 滴 Blood Donation: Tracks requests and responses.
- /devices Assistive Device: Manages listings and exchanges.
- 🤝 Caregiver: Handles service offerings and requests.

Key Relationships:

- Users create listings & requests.
- Listings receive requests & reviews.
- Requests receive responses.
- Data linked via IDs (PK/FK).

Structure Highlights:

- Organized tables per feature.
- Status fields track item lifecycle.
- Timestamps for activity logging.



API & Logic

1. Core Framework:

- FastAPI: High-performance Python web framework.
- Async Support: Handles concurrent requests efficiently.

2. API Routing:

- Structure: Modular routers (/auth, /users, /blood-donation, etc.).
- Path Operations: Defines endpoints (GET, POST, PUT, DELETE) for each resource.

3. Endpoint Logic:

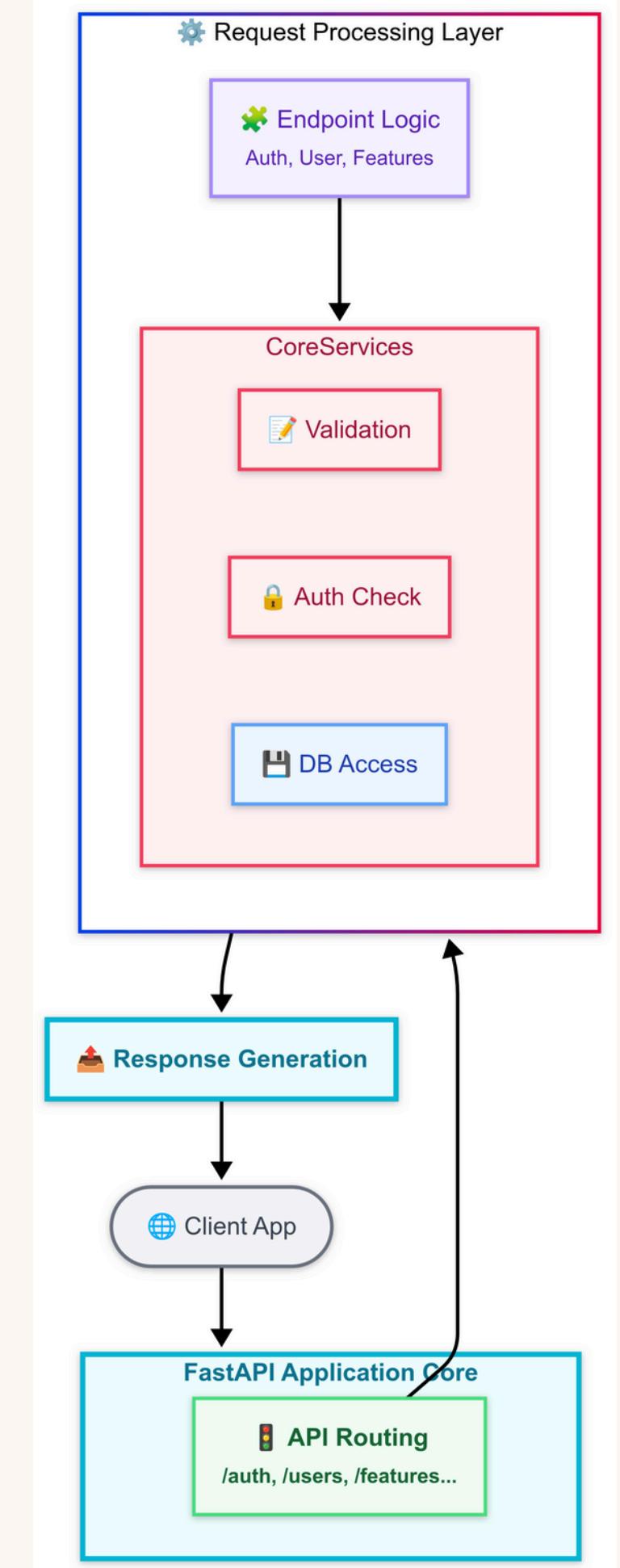
- Function: Contains the specific code executed for each API endpoint.
- Examples: User registration, fetching listings, creating requests.
- Organization: Grouped by feature (Auth, Users, Blood, Devices, Caregivers).

4. Core Services (Dependencies):

- Data Validation: Pydantic schemas ensure incoming data is correct.
- Authentication: Verifies user identity via X-User-Email header.
- Database Access: Uses SQLAlchemy sessions (provided by DI) to interact with data.

5. Request Lifecycle:

- Request → FastAPI → Router → Endpoint Logic → Services (Validation, Auth, DB) → Response.



Thank you very much!

On behalf of our team, we extend our sincere gratitude to the DESIS Ascend Educare team for their exceptional guidance and mentorship. A special thanks to our mentor Ekta and all others who shared their knowledge and supported us throughout this journey.

