## BACKEND DEVELOPMENT

### 1. Authentication & User Management — ****In Progress****

**Status:** Core implemented, security hardening ongoing  
**Completed:**

* Custom Django user model with **Admin, Provider, Customer** roles
* Functional **login & registration APIs** using DRF

**Pending:**

* Email verification workflow
* Profile image upload handling
* Advanced password recovery & security flows

**Learn / Reference**

* Django Custom User Model (Production-Ready)  
  <https://www.youtube.com/watch?v=HshbjK1vDtY>
* DRF Authentication & Permissions  
  <https://www.youtube.com/watch?v=Fhcn2qx-4VQ>

### 2. Service Requests & Bidding System — ****In Development****

**Status:** Data layer complete, business logic in progress  
**Completed:**

* APIs for creating and listing service requests
* Initial Bid model for provider quotations

**Pending:**

* Automated provider matching based on category
* Bid acceptance flow to trigger job creation

**Learn / Reference**

* Django Marketplace / Bidding System Design  
  <https://www.youtube.com/results?search_query=django+marketplace+project>
* Django Model Relationships & Workflow Logic  
  <https://www.youtube.com/watch?v=Yz4o0y7E9fY>

### 3. Financial & Invoicing System — ****Prototype Stage****

**Status:** Planning & validation phase  
**Completed:**

* Database schemas for **Invoices** and **Payments**
* Manual payment-marking scripts under testing

**Pending:**

* Automatic invoice generation on job completion
* Platform commission & tax calculation logic

**Learn / Reference**

* Django Invoice & Billing Systems  
  <https://www.youtube.com/results?search_query=django+invoice+system>
* Financial Calculations in Django Models  
  <https://www.youtube.com/watch?v=0sMtoedWaf0>

### 4. Real-time Notifications & Middleware — ****Setup Phase****

**Status:** Foundation ready  
**Completed:**

* Django Channels installed and configured
* Token-based WebSocket middleware drafted

**Pending:**

* WebSocket consumers for live bids & job updates
* Event-based notification triggers

**Learn / Reference**

* Django Channels & WebSockets (Complete Guide)  
  <https://www.youtube.com/watch?v=R4-XRK6kHjA>
* Secure WebSocket Authentication  
  <https://www.youtube.com/results?search_query=django+channels+authentication>

### 5. System Logs & Auditing — ****Draft Phase****

**Status:** Internal validation  
**Completed:**

* Audit log table capturing critical user actions

**Pending:**

* Admin-facing audit log dashboard
* Automated log retention & cleanup strategy

**Learn / Reference**

* Django Audit Logging with Signals  
  <https://www.youtube.com/results?search_query=django+audit+logs>
* Django Middleware & Signals Explained  
  <https://www.youtube.com/watch?v=O6VvZb4RZ0g>

### Backend Technology Stack (Stage 1–2)

| **Task** | **Technology** |
| --- | --- |
| API Layer | Django Rest Framework (DRF) |
| User Roles | Custom AbstractUser |
| Database | SQLite (Development) |
| Document Parsing | python-docx (Exploratory) |
| Real-time Base | Django Channels |

## FRONTEND DEVELOPMENT

### 1. Landing Page & Design System — ****60% Done****

**Status:** Structural UI complete  
**Completed:**

* PublicNavbar, PublicFooter, landing layout
* Custom CSS system and typography

**Pending:**

* Hero3D animation finalization
* Full mobile responsiveness testing

**Learn / Reference**

* React Landing Page Architecture  
  <https://www.youtube.com/watch?v=b9eMGE7QtTk>
* Responsive Design Best Practices  
  <https://www.youtube.com/watch?v=srvUrASNj0s>

### 2. Authentication & User Onboarding — ****70% Done****

**Status:** Functional, feature expansion pending  
**Completed:**

* Login, Register, Forgot Password UIs
* Role-based routing with ProtectedRoute

**Pending:**

* Google/Facebook login
* MFA interface screens

**Learn / Reference**

* React Authentication Flow (JWT)  
  <https://www.youtube.com/watch?v=E7QQ2x0KjQ4>
* Role-Based Routing in React  
  <https://www.youtube.com/watch?v=2k8NleFjG7I>

### 3. Customer & Provider Dashboards — ****40% Done****

**Status:** Layout-first approach  
**Completed:**

* Dashboard containers for customers & providers
* Basic “My Requests” and “My Bids” views

**Pending:**

* Live job tracking map
* Provider earnings analytics

**Learn / Reference**

* React Dashboard Design Patterns  
  <https://www.youtube.com/watch?v=0m4gJ3wKZyE>
* Charts & Data Visualization in React  
  <https://www.youtube.com/watch?v=5-ptp9tRApM>

### 4. Admin Management Interface — ****30% Done****

**Status:** Skeleton only  
**Completed:**

* Admin user & request table views
* Settings panel scaffolding

**Pending:**

* AI analytics dashboards
* Audit log visualization
* Commission management UI

**Learn / Reference**

* Admin Panel Design in React  
  <https://www.youtube.com/watch?v=YJPSR9dEQV8>
* Secure Admin Dashboards  
  <https://www.youtube.com/watch?v=VY4vJb0GzYI>

### 5. Service Browsing & Booking — ****50% Done****

**Status:** Core UX working  
**Completed:**

* Browse Requests page
* Multi-step Create Request form

**Pending:**

* Real-time bid updates via WebSockets
* Job completion & review flows

**Learn / Reference**

* Real-time UI with WebSockets (React)  
  <https://www.youtube.com/watch?v=HqX4mP2mE6o>
* Multi-step Forms in React  
  <https://www.youtube.com/watch?v=9B8q8kYz5Hg>

**DIAGRAMS**

**SCREENSHOTS**