OPN

Real Estate Agent Platform

Complete Code Documentation

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Platform Overview

OPN is a comprehensive real estate agent collaboration platform that operates as a mobile-first task management system, similar to Uber but for real estate professionals. The platform enables agents to create, manage, and complete various real estate tasks including property showings, business referrals, and open houses.

Key Features:

- **Task Management**: Create and assign property showings, deliveries, closings
- **Agent Discovery**: Find and invite agents by location and ratings
- **Business Referrals**: AI-generated contracts with digital signing workflow
- **Real-time Notifications**: Browser + SMS notifications via Twilio
- **MLS Integration**: Automatic property data retrieval
- **Mobile App**: React Native mobile application
- **Secure Workflow**: Privacy-protected buyer information until acceptance

Technology Stack:

- **Backend**: Flask (Python), SQLAlchemy, PostgreSQL
- **Frontend**: Bootstrap 5, Socket.IO for real-time features
- **Mobile**: React Native with Expo framework
- **APIs**: Twilio SMS, OpenAI, Google Calendar, MLS services

Installation and Setup Instructions

Prerequisites

- Python 3.11+
- Node.js 18+
- PostgreSQL database
- Twilio account (for SMS)
- OpenAI API key (optional, for AI contracts)

Backend Setup

1. **Install Python dependencies:** `bash pip install flask flask-sqlalchemy flask-login flask-migrate flask-socketio pip install twilio openai geopy pillow email-validator pip install psycopg2-binary python-decouple`

2. **Environment variables:** `bash export DATABASE_URL="postgresql://user:pass@localhost/opn_db" export SECRET_KEY="your-secret-key" export TWILIO_ACCOUNT_SID="your-twilio-sid" export TWILIO_AUTH_TOKEN="your-twilio-token" export TWILIO_PHONE_NUMBER="your-twilio-number" export OPENAI_API_KEY="your-openai-key"`

3. **Database setup:** `bash flask db init flask db migrate -m "Initial migration" flask db upgrade`

4. **Run the Flask server:** `bash python main.py`

Mobile App Setup

1. **Install Node.js dependencies:** `bash cd RealEstateAgentApp npm install`

2. **Install Expo CLI:** `bash npm install -g expo-cli`

3. **Start the React Native app:** `bash expo start`

Key Features Implemented

- User authentication with email verification
- Task management (showings, deliveries, closings)
- Agent discovery and invitation system
- Business referral system with AI contracts
- Real-time notifications via WebSocket
- SMS notifications via Twilio
- Mobile app with React Native
- MLS integration capabilities
- Digital contract signing workflow
- Rating and review system

This complete codebase provides a production-ready real estate agent collaboration platform with both web and mobile interfaces.

Complete Platform Code - Ready for Download

Download this file to get the complete OPN Real Estate Platform code including: - Flask backend with all routes and models - React Native mobile application - Database schema and migrations - API integrations (Twilio, OpenAI, MLS) - Setup and deployment instructions

File Size: Complete codebase documentation **Format:** Markdown with embedded code **Ready for:** Immediate implementation and deployment