# Betty Boulder Project Plan

**Overview:**

The Better Boulder Project aims to develop an intelligent, AI-driven real estate assistant that enhances how Realtors and clients connect in the Boulder, Colorado housing market. Betty Boulder will serve as a smart, friendly, and Boulder-savvy AI that can answer questions, share property details, and connect clients with realtors using both voice and chat interactions.

This project brings together multiple components: a cross-platform mobile app, a backend powered by AI and real estate data, MLS integration, and AI voice and chat interfaces. This project plan outlines the deliverables and development approach for the Betty Boulder system and serves as the framework for execution and evaluation.

**Deliverables:**
- Feature 1: Flutter mobile app
- Feature 2: AI Backend Integration
- Feature 3: MLS Data Integration
- Feature 4: Voice and chat interfaces
- Final demo and documentation

**Project Timeline:**

| Project Phase: | Deliverables/Milestone: | Baseline Time Box Dates | |
|---|---|---|---|
| | | Start | Finish |
| **Initiate** | ● Finalize Business Case<br>● Receive Business Case Approval<br>● Identify Project Team Members<br>● Initiate Project | 8/21/25 | 9/8/25 |
| | | Start | Finish |
| **Plan** | ● Complete Project Charter<br>● Conduct Project Kickoff<br>● Develop Detailed Requirements<br>● Develop Detailed Test Plan<br>● Develop Detailed Training Plan<br>● Complete Detailed Risk Analysis<br>● Develop Work (Schedule) | 9/22/25 | 10/5/25 |
| | | Start | Finish |
| **Execute** | ● Finalize detailed requirements<br>● Complete Test Plan<br>● Complete Training Plan<br>● Finalize Implementation Plan<br>● Complete Testing<br>● Complete Training<br>● Complete Implementation | 10/6/25 | In Progress |

| | | Start | Finish |
|---|---|---|---|
| **Close** | ● Validate Measures of Success<br>● Ensure operational controls are in place<br>● Obtain business sign-off on deliverables<br>● Receive approval to close the project | TBD | TBD |

**Roles and Responsibilities:**

- Manav Shah: As Backend Team Lead, I am responsible for designing and implementing the backend architecture to ensure reliability, scalability, and seamless integration with the AI and Flutter frontends. So far, I have developed the appointment handler and data model to support scheduling functionality and am currently setting up the CI/CD pipeline to automate builds and deployments.

- Nathan Reed: As a backend developer, I am responsible for developing the backend infrastructure that connects the Flutter mobile app, AI services, and MLS data integration. My role focuses on ensuring that the backend is working and efficient for frontend and AI integration.

- Charlotte Hauke: As a backend developer/mobile expert, I am responsible for leading the architecture and implementation of the Flutter mobile app for iOS and Android, integrating AI assistant features (chat, voice, and MLS data) into the mobile experience using backend APIs and documenting mobile architecture, dependencies, and integration workflows.

- Sharon Xiang: As Documentation Expert and Marketing Assistant, I am responsible for supporting development, conducting code reviews, and researching solutions to enhance the Betty Boulder user experience. So far, I have researched AI avatar alternatives for the Betty Boulder persona, reviewed both frontend and backend codebases to understand system architecture, and fixed several critical errors to ensure proper data display and functionality.

- Calvin Schaller: as backend developer and frontend expert, I am responsible for leading and designing the frontend features such as the website, the chat box, and fluid UI infrastructure while maintaining response accuracy and speed. I am also responsible for providing support to the backend team by assisting with architecture for the AI service itself.

- Sansh Goel: I am responsible for developing and assisting in both frontend and backend architecture. Integrating the AI chatbot with features like voice, chat, and MLS data in the website and the application will be something I will focus on.

**Work Breakdown Structure:**

| ID | Phase | Deliverable/Task | Dependencies |
|---|---|---|---|
| 1.0 | Initiation | Define Project Scope | - |
| 1.1 | | Identify team members and assign roles | 1.0 |
| 1.2 | | Draft Project Charter | 1.1 |
| 2.0 | Planning | Develop features roadmap and milestones | 1.2 |
| 2.1 | | Create and organize KANBAN board | 2.0 |
| 2.2 | | Define functional and nonfunctional requirements | 2.0 |
| 2.3 | | Plan data sources and AI accuracy benchmarks | 2.2 |
| 3.0 | Frontend Development | Design and implement chat and voice UI | 2.2 |
| 3.1 | | Integrate backend APIs for listings and appointments | 3.0, 3.3 |
| 3.2 | | Implement user login and authentication flow | 3.0 |
| 3.3 | Backend Development | Develop appointment handler and data model | 2.2 |
| 3.4 | | Implement LLM integration for AI responses | 3.3 |
| 3.5 | | Build property listing management (add, edit, delete) | 3.3 |
| 3.6 | | Set up CI/CD pipeline for automated testing and deployment | 3.3 |

| | | | |
|---|---|---|---|
| 3.7 | | Integrate MLS data API and caching for performance | 3.3 |
| 3.8 | Agent Features | Enable user-agent connection (chat or call) | 3.5 |
| 3.9 | | Create agent profile management system | 3.5 |
| 3.10 | | Ensure secure communication and data access | 3.9 |
| 4.0 | Testing | Conduct unit and integration testing | 3.0, 3.3, 3.8 |
| 4.1 | | Validate AI accuracy and performance | 3.4 |
| 4.2 | | Perform latency and load testing | 3.7 |
| 5.0 | Demo | Prepare presentation and demo | 4.0 |
| 5.1 | | Finalize documentation | 5.0 |
| 5.2 | | Submit final deliverables | 5.1 |

**Current KANBAN Board:**



## Betty Boulder

Summary | List | **Board** | Code | Forms | Timeline | Pages

Search board | Filter

| TO DO 10 | IN PROGRESS 4 | IN REVIEW | DONE 9 ✓ |
|---|---|---|---|
| **API Setup** — KAN-9 | **AI Chatbot Integration (Frontend)** — KAN-7 | | **User Authentication UI** — KAN-4 ✓ |
| **Authentication Module** — KAN-10 | **UI Enhancements** — KAN-8 CS | | **User Dashboard** — KAN-5 ✓ |
| **Property Management APIs** — KAN-11 | **Test Application and Create Bug Tickets** — KAN-22 ⌃ CH | | **Agent Dashboard** — KAN-6 ✓ |
| **Agent Management APIs** — KAN-12 | **Set up CI/CD** — KAN-25 MS | | **User Authentication Flow** — KAN-18 ✓ |
| **AI Chatbot Backend Integration** — KAN-13 | | | **Agent Authentication** — KAN-19 ✓ |
| **Data Aggregation Service** — KAN-14 | | | **Complete property listings and edit functionality with full backend integration** — KAN-21 ✓ |
| **Property Recommendation Engine** — KAN-15 | | | **Create Appointment Model/Handlers** — KAN-20 ✓ MS |
| **Chatbot Development** — KAN-16 | | | **Create dedicated Help & Support and Settings screens integrated into the Profile section - User** — KAN-23 ✓ = |
| **Data Aggregation Automation** — KAN-17 | | | **Import Issues** — KAN-24 ✓ ⌄ SX |
| **Set up CI/CD** — KAN-26 = | | | |
| + Create | | | |

**Tools and Technologies:**
- Frontend: Flutter
- Backend: Go
- AI: TBD
- Testing: Postman
- Project Management: Jira, Slack
- CI/CD: GitHub Actions, Digital Ocean

**Communication Plan:**
- Progress updates from each member twice a week on Slack (Tuesday and Friday)
- Standup call with the sponsor weekly
- Biweekly TA meeting