

Product Requirements Document

AI Customer Service Sentiment Analysis Platform

Document Version: 1.0

Last Updated: April 18, 2025

Status: MVP Development

1. Executive Summary

The AI Customer Service Sentiment Analysis platform is a SaaS solution designed to help businesses analyze, track, and improve customer service interactions through automated sentiment analysis. The platform processes customer service data (chat logs, call transcripts, emails) to provide actionable insights into customer sentiment, enabling organizations to identify trends, train agents more effectively, and ultimately enhance customer satisfaction.

This PRD outlines the requirements for the MVP (Minimum Viable Product) version of the platform, which will be built in a 24-hour development sprint using Replit.

2. Problem Statement

Customer service teams struggle to:

- Accurately assess customer sentiment at scale
- Identify recurring issues that lead to negative experiences
- Track agent performance objectively
- Quantify the ROI of customer service improvements
- Proactively address issues before they escalate

Current solutions either require significant manual review or provide sentiment analysis without actionable insights specific to customer service contexts.

3. Target Users

Primary Users

- **Customer Service Managers:** Responsible for team performance and customer satisfaction metrics

- **Customer Experience (CX) Executives:** Seeking data-driven insights to improve overall customer experience
- **Customer Service Agents:** Looking to improve their performance and response effectiveness

Secondary Users

- **Marketing Teams:** Using sentiment data to inform messaging
 - **Product Teams:** Identifying product issues through customer service interactions
 - **Executive Leadership:** Tracking overall customer satisfaction as a business metric
-

4. MVP Feature Requirements

4.1 Core Features

User Authentication & Account Management

- User registration and login
- Email verification process
- Password recovery functionality
- Basic user profile management

Data Input & Integration

- Manual upload of customer service transcripts (CSV, TXT)
- Basic data cleaning and preprocessing
- Future API integration hooks (placeholder for post-MVP)

Sentiment Analysis Dashboard

- Overview of sentiment metrics (positive, neutral, negative percentages)
- Trend analysis over time (7-day, 30-day views)
- Key performance indicators with visual representations
- Agent performance comparison

Survey Creation Wizard

- 3-step survey creation process
- Template selection for common customer service scenarios
- Basic customization options

- Preview functionality

Analytics & Reporting

- Sentiment breakdown by category
- Common topics/issues identification
- Basic export functionality (CSV format)
- Shareable report links

Settings & Configuration

- Notification preferences
- Display preferences
- Billing information (placeholder for post-MVP)

4.2 User Interface Requirements

- Responsive design (mobile, tablet, desktop)
- Accessible interface (WCAG 2.1 AA compliance targets)
- Branded experience with customizable elements
- Intuitive navigation with clear user flows
- Dashboard-centric experience for data visualization

4.3 Non-Functional Requirements

- **Performance:** Page load times <2 seconds
 - **Security:** Secure authentication, data encryption at rest
 - **Scalability:** Support for future feature expansion
 - **Reliability:** MVP uptime target >99%
 - **Data Retention:** Compliance with standard data practices
-

5. User Flows

5.1 Primary User Flow

1. User lands on marketing page
2. User signs up for an account
3. User completes onboarding

4. User uploads first dataset or creates first survey
5. User views initial sentiment dashboard
6. User explores analytics options
7. User exports or shares insights

5.2 Survey Creation Flow

1. User navigates to "New Survey"
2. User selects survey template
3. User customizes questions and appearance
4. User reviews preview
5. User deploys survey (placeholder functionality for MVP)

5.3 Analytics Review Flow

1. User navigates to Analytics
 2. User selects date range and filters
 3. User explores visual representations of data
 4. User identifies insights
 5. User exports or shares report
-

6. Technical Requirements

6.1 Technology Stack

- **Frontend:** Next.js with Tailwind CSS
- **Development Environment:** Replit
- **Data Storage:** ReplDB (for MVP)
- **Authentication:** Built-in authentication system
- **Visualization:** react-chartjs-2

6.2 Data Requirements

- Customer service transcripts (text data)
- User account information
- Survey templates and customizations
- Analytics configurations and preferences

6.3 Integration Points

- Placeholder API endpoints for future integrations
 - Export functionality to standard formats
-

7. Design Requirements

7.1 Brand Guidelines

- Implement brand colors in `tailwind.config.js`
- Use consistent typography throughout the application
- Include brand logo and favicon
- Add subtle sacred-geometry watermark to analytics section

7.2 Design Principles

- Clean, modern interface
 - Data-forward visualization
 - Intuitive, wizard-based workflows
 - Mobile-responsive layouts
-

8. Success Metrics

8.1 MVP Success Criteria

- Completed development within 24-hour timeframe
- Functioning user flows from registration through analytics
- Ability to demonstrate core value proposition in 3-minute demo
- Zero critical bugs in primary user flows

8.2 Business KPIs (Post-MVP)

- User registration conversion rate
 - User retention (7-day, 30-day)
 - Survey completion rates
 - Feature adoption metrics
 - Time-to-value for new users
-

9. Future Considerations (Post-MVP)

9.1 Feature Expansions

- Real-time sentiment analysis
- Integration with popular customer service platforms
- Advanced analytics and predictive insights
- Custom AI model training
- Multi-language support

9.2 Business Model Evolution

- Tiered subscription plans
 - Enterprise customization options
 - Professional services add-ons
 - Data insights marketplace
-

10. Development Timeline

Refer to the 24-Hour Replit-Only MVP Build Schedule for detailed implementation timeline.

Key milestones:

- **Thursday Evening:** Base setup, landing page, authentication
 - **Friday Morning:** Core functionality, dashboard, survey wizard
 - **Friday Afternoon:** Analytics, polish, testing
 - **Friday 5:30 PM:** Deliverables completed and shared
-

11. Risks and Mitigations

11.1 Development Risks

- **Risk:** Time constraints limit feature completeness
 - **Mitigation:** Focus on visual completeness with placeholder functionality where needed
- **Risk:** Technical challenges with Replit environment
 - **Mitigation:** Prepare fallback solutions and simplified implementations
- **Risk:** UI generation via openv0 may require significant adjustments
 - **Mitigation:** Allocate buffer time for modifications and styling fixes

11.2 Business Risks

- **Risk:** Value proposition not clear in MVP
 - **Mitigation:** Ensure demo highlights core differentiators and future potential
 - **Risk:** MVP appears too simplistic for target users
 - **Mitigation:** Include visual mockups of advanced features coming in future releases
-

12. Approval and Stakeholders

12.1 Approval Requirements

- MVP scope sign-off
- Demo approval criteria
- Investor presentation requirements

12.2 Key Stakeholders

- Technical lead
 - Product manager
 - Design lead
 - Potential investors/testers
 - Strategic partners
-

End of Product Requirements Document