

Backend Development & AI Integration

Overview

The backend of the AI-powered CRM Chrome extension is responsible for processing and analyzing customer interactions, providing real-time feedback to agents, and generating insightful reports for managers. This phase will focus on implementing AI-driven call analysis, performance evaluation, and seamless integration with CRM systems.

Milestone – Backend Development & AI Integration

Timeline: 4 weeks

Key Tasks and Deliverables:

1. Call Recording & Data Processing

- Develop a secure system to **capture and store call recordings** from agents.
- Implement **real-time call transcription** using OpenAI's Whisper API.
- Ensure encrypted storage and compliance with data privacy regulations (e.g., GDPR, HIPAA).

2. AI-Powered Analysis & Feedback System

- Utilize **GPT-4.5 for sentiment analysis and call scoring**.
- Extract key moments from conversations (e.g., objections, resolutions, commitments).
- Assign performance scores and generate personalized agent feedback.
- Implement a scoring model to track agent progress over time.

3. Gamification & Performance Tracking

- Develop a **leaderboard system** to rank agents based on performance.
- Design a **level-up mechanism** to reward agents for improvements.
- Store and display performance metrics in a structured database for long-term tracking.

4. Manager Insights Module

- Build a **dashboard for managers** to monitor agent performance.
- Provide **AI-generated reports** highlighting strengths, weaknesses, and coaching opportunities.
- Implement customizable filters for managers to analyze data at different levels (individual, team, or overall trends).

5. CRM Integration & API Development

- Develop **RESTful APIs** to integrate seamlessly with existing CRM systems.

- Ensure real-time **synchronization of performance data** with CRM.
- Implement **webhooks** to trigger AI analysis and feedback generation upon call completion.

6. Scalability & Cloud Deployment

- Deploy backend services on a **cloud platform (AWS/GCP/Azure)** for high availability and scalability.
- Implement **load balancing and caching mechanisms** to optimize performance.
- Use **serverless functions** where applicable to reduce infrastructure costs.

7. Security & Compliance

- Implement **role-based access control (RBAC)** for data security.
- Ensure **end-to-end encryption** for stored and transmitted data.
- Conduct **penetration testing** and apply security best practices.

Expected Outcomes

- A fully functional backend capable of handling **call analysis, AI-driven feedback, and CRM integration**.
- A scalable and secure architecture that supports real-time data processing.
- A seamless experience for both agents and managers through automated reporting and performance tracking.