Process Design Document (PDD)

User Personalized Muscle Training System

1. Introduction

1.1. Purpose of the Document

This document outlines the design and implementation of an AI-driven User Personalized Muscle Training System, integrating Expert System AE25-004, Modified LLaMa 4.0-AgenticSuperFloat, PA-420-TR-UserTrainMscl (Power Automate workflow), and GR_USR_MSCL (Grafana dashboard). It defines the transition from manual training processes to an automated, AI-augmented workflow.

1.2. Objectives

a. Automate personalized training recommendations using Expert System AE25-004.
b. Enable real-time user interaction via Modified LLaMa 4.0-AgenticSuperFloat (AI agent).
c. Streamline daily training instruction delivery via PA-420-TR-UserTrainMscl.
d. Visualize user progress through GR_USR_MSCL dashboards.

1.3. Key Contacts

Role	Name	Email
Project Lead	Dr. Elena Rodriguez	elena.rodriguez@domain.com
AI Architect	James Tanaka	james.tanaka@domain.com
Automation Engineer	Priya Kapoor	priya.kapoor@domain.com
Fitness SME	Markus Weber	markus.weber@domain.com

1.4. Minimum Prerequisites for Automation

- Expert System AE25-004 installed (v2.1.3 or higher).
- Modified LLaMa 4.0-AgenticSuperFloat API access (endpoint: api.agenticai.com/v4/superfloat).
- Power Automate Premium License for PA-420-TR-UserTrainMscl.
- Grafana 9.5+ with PostgreSQL plugin for GR_USR_MSCL.

2. As-Is Process Description

2.1.   Process Overview

The current process relies on manual creation of training plans by fitness trainers, with progress tracked via spreadsheets and email updates.

2.2.   Applications Used in the Process

- Microsoft Excel (training plans).
- Gmail (communication).
- Google Sheets (progress tracking).

2.3.   High Level As-Is Process map

a. Trainer assesses user's fitness level.
b. Manual creation of a 4-week plan in Excel.
c. Daily email reminders sent manually.
d. Progress logged in Google Sheets.

2.4.   Detailed As-Is Process Steps

a. User Onboarding: Trainer collects user data (age, weight, goals).
b. Plan Creation: Trainer spends 2–3 hours designing a plan.
c. Communication: Daily emails sent at 7:00 AM manually.
d. Progress Tracking: User self-reports metrics, updated weekly in Sheets.

3. To-Be Process Description

3.1.   To-Be Detailed Process Map

a. User submits goals → Expert System AE25-004 generates plan.
b. Modified LLaMa 4.0-AgenticSuperFloat interacts via chat (adjusts plan dynamically).
c. PA-420-TR-UserTrainMscl triggers daily instructions at 6:00 AM.
d. GR_USR_MSCL aggregates data (completion rate, muscle growth).

3.2. Detailed To-Be Process Steps

a. Automated User Onboarding:

- User inputs data into web form (e.g., "Goal: 10% muscle gain in 3 months").
- Expert System AE25-004 processes data using rule-based logic (e.g., "IF goal = muscle gain, THEN recommend hypertrophy-focused plan").

b. Dynamic Plan Adjustment

- Modified LLaMa 4.0-AgenticSuperFloat engages user via mobile app:
- Example: "Your recovery rate is 85%. Increase weights by 5% today?"
- AI adjusts plan based on user feedback and biometric data (e.g., wearable integration).

c. Daily Automation via PA-420-TR-UserTrainMscl

- Workflow steps:
    - Fetch training plan from AE25-004 (API call).
    - Send SMS/email at 6:00 AM with exercise list.
    - Log completion status in PostgreSQL DB (table: usr_mscl_logs).

d. Progress Visualization in GR_USR_MSCL

- Grafana dashboard panels:
    - Panel 1: Weekly muscle mass growth (source: DEXA scan imports).
    - Panel 2: Adherence rate (target: 90%).
    - Panel 3: AI satisfaction score (LLaMa interaction ratings).

3.3. Parallel Initiatives / Overlap

- Integration with MyFitnessPal API for nutrition tracking (out of scope for RPA).

3.4. In Scope for RPA

- PA-420-TR-UserTrainMscl: Daily notifications, report generation, DB updates.

3.5. Out of Scope for RPA

- Hardware integration (e.g., wearable device firmware).
- Direct modification of Expert System AE25-004's core logic.

3.6.   Business Exceptions Handling

Exception	Handling Mechanism
User misses 3+ sessions	Modified LLaMa 4.0 initiates motivational prompts.
Invalid biometric data	Fallback to last valid plan + email alert to trainer.

3.7.   Application Error and Exception Handling

- PA-420-TR-UserTrainMscl retries failed API calls 3x (5-minute intervals).
- Critical errors escalate to Priya Kapoor (Automation Engineer).

3.8.   Reporting

- GR_USR_MSCL generates PDF reports weekly (shared via email).
- KPIs:
    - 95% training adherence target.
    - 15% avg. muscle growth over 12 weeks.

3.9.   Other Observations

- Modified LLaMa 4.0 reduces trainer workload by 40% (estimated).
- Users prefer SMS over email (72% adoption rate in pilot).

3.10.   Additional Sources of Process Documentation

- AE25-004 User Manual (internal Confluence).
- AgenticSuperFloat API Spec (GitLab repo: agentic/llama4.0-docs).