

Product Requirements Document (PRD)

Product Name: Personal Work-Time Activity Analytics System

Status: Draft

1. Purpose & Vision

Provide personalized insights into physical activity by distinguishing activity during working hours and outside working hours, enabling fair day-to-day comparison beyond Samsung Health limitations.

2. Goals

- Ingest Galaxy Watch activity data via Health Connect
- Classify activity into Working Hours vs Off Hours
- Compare today with the most recent comparable day

3. Target User

Single user, Samsung ecosystem, interested in self-optimization and data ownership.

4. Core Features

- Activity ingestion
- Working schedule configuration
- Session splitting across work boundaries
- Daily comparison and trend reporting

5. Technical Stack

Backend: Java Spring Boot

Database: PostgreSQL

API: REST (JSON)

6. Data Models

ActivitySession (raw), ActivitySegment (derived), WorkingSchedule.

7. Key Logic

- Overlap calculation
- Proportional metric allocation

- Skip-day comparison logic

8. Out of Scope

- Raw sensor data
- Medical diagnosis
- Multi-user support

9. Future Enhancements

Weekly reports, PDF export, ML scoring, web dashboard.