**Cadmium Model Data Form**

Title: Player Substitution System Model

Type: DEVS Model

Acronym/Short name: PSS

Purpose for which Developed: To model and simulate a coach’s decision-making process for player substitutions based on defined player metrics (mental, fatigue, time played, time spent recovering) and game scores.

Other Applications for which it is Suitable: strategy simulations, decision-making models

Date Developed/Implemented: March 2025

Domain: Sports Simulation

URL: <https://github.com/yelfaram/Cadmium-Player-Substitution-System/>

Description (including characteristics): The Player Substitution System (PSS) Model is a DEVS-based simulation model designed to replicate the decision-making process of a coach managing player substitutions for a team in a typical sports game. The model consists of the following components: SubstitutionLogic (atomic), GameScore (atomic), Player (atomic), Team (coupled), Coach (coupled – top level).

Links to Related Documents

Short Title: Player Substitution System

URL: <https://docs.google.com/document/d/1HAZPzIzrDtJvdolbaWClZi2Y82WgYmA7sv4FB_I5Hcg>

Description: This document provides a detailed analysis and description of the Player Substitution Model. It includes its structure, specifications, testing strategies, and execution results.

Keywords: DEVS, Sports Simulation, Decision Making

Developer:

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Comments: