PatternCore AI - Software Requirement Specification (SRS)

1. Introduction

1.1 Purpose:

The purpose of this document is to outline the specifications and design of the PatternCore AI model, developed to analyze and predict outcomes of roulette games based on screenshots captured from live game results.

1.2 Scope:

PatternCore AI is designed to analyze sequences of roulette outcomes, learn evolving patterns, and predict future results with high confidence. It uses OCR to extract results from screenshots, processes them into a dataset, and trains a model capable of real-time predictions.

2. Functional Requirements

- OCR-based outcome extraction from multiple screenshots.
- Each screenshot contains approx. 500 outcomes, captured every 3 hours.
- Automatically label extracted numbers with 20 seconds gap as timestamp.
- Store outcomes into a CSV file for training purposes.
- Use last 3 to 8 numbers to determine prediction patterns.
- Train model with at least 3000 outcomes (6 screenshots).
- Predict next outcome within 5 seconds with confidence score.
- If prediction is wrong, manually update the model instantly with correct outcome for live learning.

3. Advanced Features

- PatternCore: A dedicated submodule to analyze different patterns from different screenshots.
- Confidence Score: Probability score (0-100%) for each predicted outcome.
- Decision Maker: Determines which pattern applies at the moment and predicts accordingly.
- Support for continuous retraining when new patterns emerge (new data not matching older trends).

4. Technical Design

- Screenshot input -> OCR (EasyOCR) -> Cleaned outcomes.
- Store outcomes with 20s interval -> CSV.
- Train model using LSTM or similar sequence models.

- Use sliding window of last 3-8 outcomes to predict the next.
- Generate prediction + confidence score.
- Feedback loop: if wrong, manual update -> retraining.

5. Risk Handling

- Issue: Roulette pattern changes unpredictably.

  Solution:

  - Keep retraining with latest screenshots.
  - Real-time correction and update module.
  - Maintain a flexible model with rolling training dataset.

6. Naming Convention

- PatternCore AI for main model.
- Submodules: PatternLearner, OCRProcessor, ConfidenceAnalyzer, DecisionCore.

7. Output

- Predictions saved with timestamp and confidence score.
- CSV file logs outcomes and predictions.

8. Notes

- PatternCore helps differentiate patterns between screenshots.
- No emojis or special characters to avoid PDF encoding errors.
- Focus is on minimal delay, maximum learning.