This repository contains the replication package for the article **"Hazardous Times: Animal Spirits and U.S. Recession Probabilities."** It includes all necessary R code, raw data, and processed data in the start-stop (counting process) format required to reproduce the empirical results, tables, and figures from the study.

Project Description:
The study assembles monthly U.S. macroeconomic time series from the Federal Reserve Economic Data (FRED) and related sources—covering labor market conditions, consumer sentiment, term spreads, and credit spreads—and implements a novel "high water mark" methodology to measure the lead times with which these indicators signal NBER-dated recessions.

Contents:

- **Code:** R scripts for data cleaning, multiple imputation, survival analysis, and figure/table generation. A top-level master script (`run_all.R`) executes the entire analytical pipeline end-to-end.
- **Data:**
  - `Raw/`: Original data pulls from primary sources.
  - `Analysis_Ready/`: Cleaned series, constructed cycle-specific extremes (high water marks), lead time variables, and the final start-stop dataset for survival analysis. The final curated Excel workbooks used as direct inputs for the replication code. **(Note: These Excel sheets must be saved as separate `.xlsx` files in the designated directory before running the R code.)**
- **Documentation:** This README file and detailed comments within the code.

Key Details:

- **Software Requirements:** The replication code is written in R. A list of required R packages (with versions) is provided in the reference list of the article.
- **Missing Data:** Addressed via Multiple Imputation by Chained Equations (MICE).
- **License:** The original raw data from FRED is subject to its own terms of use, which require citation. The R code is released under the MIT License. All processed data, constructed variables, and analysis-ready datasets created by the author are dedicated to the public domain under the CC0 1.0 Universal Public Domain Dedication.

Instructions:

1. Download the entire repository.
2. Install the required R packages.
3. Save Excel sheets from the workbook “Hazardous_Times_Data.xlsx” as separate .xlsx files in the designated directory before running the R code in step 4.
4. Run the master script run_all.R to fully replicate the study's analysis from the provided Analysis_Ready data. This script will regenerate all tables and figures.

Users should consult the main publication for full context, theoretical motivation, and series-specific citations.