R version 4.1 and Matlab2016b were used.

To install R, visit <https://cran.r-project.org/bin/windows/base/old/4.2.2/>.

To install Matlab, visit <https://www.mathworks.com/products/matlab.html>.

1. Running SM dry-down identification.m to find soil drydowns and save the data;
2. Running SM threshold estimation.R to estimate the soil moisture threshold ;
3. Running RandomForest recursive feature elimination (RFE) analysis.R and RandomForest Importance and SHAP calculation.R to get the Random Forest results;
4. Running Plot Fig1-5.m to generate the figures in main text.