CFP Simulator Documentation

# Cleaning Schedule Process

1. Navigate to the College Football page on Sports Reference
   1. <https://www.sports-reference.com/cfb/>
2. Open “Years” and the “Schedule & Results” page for the year of interest
3. Download the CSV
   1. Share & Export – Modify, Export, & Share Table
   2. Click “Comma separated” among the red text options
   3. Delete the header and footer text above the data
   4. Open Notepad or another text application
   5. Paste the CSV data into the Notepad and save the file
      1. Save as type: “All Files”
      2. Type your preferred file name, end it with “.csv”, and save it to the “Input Data/Update Elo” folder
4. Run the “clean\_schedule.py” Python file
   1. Set the proper input variables
      1. SCHEDULE should have the path of the schedule file within your computer
      2. PAST should be ‘Past’, ‘New’, or ‘Current’ within quotes
         1. “Past” if this is a past schedule with full scores that you want to use to adjust Elo’s
         2. “New” if this is a blank newly created schedule that you want blank to run through the simulator
         3. “Current” if it is part way through a season and you want to take into account the games that have already run in the simulation

# Update Elo Process

1. Make sure the input schedule has been cleaned with the proper inputs
2. Run the “update\_elo.py” Python file
   1. Set the proper input variables at the top of the file
      1. Path of the ELO data will not usually be changed (‘Elo By Year.xlsx’)
      2. Path of the SCHEDULE file – (‘Completed’) schedule if for the current season
      3. Path of the CONFERENCES file – choosing between the current (“Old”) conference setup and the new upcoming conference realignment
      4. YEAR for the Elo that is being updated, if replacing the column of the Elo data then make sure the YEAR name is the same as the column you are updating
      5. CURRENT\_SEASON is ‘True’ if this is being used to update for part way through the current season or ‘False’ if this is the results of a full season
      6. THEORETICAL is ‘True’ for if this is a custom fake scenario that is being run during the season else it is ‘False’

# Run the Overall Simulation

1. Make sure the schedule has been cleaned and the Elo file has been updated
2. Set the proper input variables at the top of the file
   1. Confirm the path files are correct for CONFERENCES, ELO, SCHEDULE, and RECORDS
      1. Both MOV file paths will likely not be updated
   2. If running manually then update the N (number of simulations), AQ (number of automatic qualifiers), and PLAYOFF (number of playoff teams)
   3. Update the MID\_SEASON\_SIM variable to ‘True’ if the simulation is being run during the current season or ‘False’ if it is not the current season
      1. This will require adjustment when it is not the current season to fix the Elo input values
   4. Custom scenario values
      1. CONF\_CHIPS should be “None” (no quotes) if not a custom scenario and otherwise should be the path of the custom conference championship CSV
      2. CUSTOM\_TAG will be added to the end of the file name and should denote any special changes to a simulation run. Otherwise it should be empty quotes (“”)
3. Push all updates to the GitHub to set up the GitHub Action simulation tools

# Running Custom Scenarios

1. Update game results to fit custom scenario
   1. Set up new Elo ratings
      1. Add future games to completed theoretical schedule as a new week (if predicting multiple games don’t duplicate in one week, just add multiple weeks)
      2. Run update\_elo script with correct inputs
   2. Remove games from upcoming schedule that now have custom results
2. Create conference championship game file with Conference, Winner, and Loser columns as a CSV
3. Update inputs for main simulation and add custom tag to know which output relates to what scenario