

- Input Files required:
  1. Loadcells
  2. Loadcells metadata
  3. Sensor climate data
  4. Sensor unit map
  5. Plant eye
- Merge all the data files into R data by executing the script **createExpData.R**
- Create folder: **results**, and within that 2 sub-folders;  
**rawFeaturesTimeSeries** and **smthFeaturesTimeSeries**
- Run the pipeline script **EZTr\_main.R** by considering the following **experiment-specific changes**:
  - ⇒ L 35. load("./data/**HTP\_data\_Exp41\_PM**.RData")
  - ⇒ L 36. allData <- **HTP\_data\_Exp41\_PM**
  - ⇒ L 38. LastDate="2020-01-28"
  - ⇒ L 39. irrgr.dts <- c("2019-12-28", "2019-12-30", "2020-01-02", "2020-01-04", "2020-01-06",  
"2020-01-08", "2020-01-10", "2020-01-11", "2020-01-13", "2020-01-14",  
"2020-01-16", "2020-01-17", "2020-01-18", "2020-01-20", "2020-01-22",  
"2020-01-23", "2020-01-25", "2020-01-27")
  - ⇒ L 43. Date1="2019-12-27 23:46:00"
  - ⇒ L 44. Date2="2020-01-28 23:45:00"
  - ⇒ L 45. opPATH <- "./results/Exp41-PM-NOirrg/"
  - ⇒ L 46. opPATH.smth="D:/EZTr-master/results/Exp41-PM-NOirrg/smthFeaturesTimeSeries/"
  - ⇒ L 47. opPATH.raw="D:/EZTr-master/results/Exp41-PM-NOirrg/rawFeaturesTimeSeries/"
  - ⇒ In **functions**,  
**extractRawLCmatrix**: L 10. m.lc.df\$ts <- **dmy\_hm(m.lc.df\$timestamp)**  
**calculateTr**: L 38. LAI.mat[i, ] <- (((**sec.lai.tmp/100**))/0.36)\*(1/0.26)/10000)
  - ⇒ L 62. meta.d.sp <- meta.d[meta.d\$Species==species.nm[1], ]
  - ⇒ L 92. meta.d.LCmat <- meta.d.sp[meta.d.sp\$unit %in% colnames(LC.MAT.f)[-1], **c(1,2,6,7,8)**]  
**(# "unit", "old\_unit", "Genotype", "G..Alias", "Replicates" #)**  
*Based on **unq.clm.var**, assign **x***  
***# [1] "Temperature (Â°C)" [2] "Relative humidity(%)" [3] "Windspeed average (m/s)" [4]***  
***"Windspeed max (m/s)" [5] "Solar radiation (W/(s\*mÂ²))" [6] "Precipitation (mm)"***  
***[7] "Wind direction (Â°)"***
  - ⇒ L 175. **temperature**.DF <- extractWthrVar(**x=1**, y = clm.df.mapped)
  - ⇒ L 176. temperature.DF\$ts <- temperature.DF\$ts + **5.5\*60\*60**
  - ⇒ L 178. **relHUM**.DF <- extractWthrVar(**x=2**, y = clm.df.mapped)
  - ⇒ L 179. relHUM.DF\$ts <- relHUM.DF\$ts + **5.5\*60\*60**
  - ⇒ L 181. **windS**.DF <- extractWthrVar(**x=3**, y = clm.df.mapped)
  - ⇒ L 182. windS.DF\$ts <- windS.DF\$ts + **5.5\*60\*60**
  - ⇒ L 184. **solarRad**.DF <- extractWthrVar(**x=5**, y = clm.df.mapped)
  - ⇒ L 185. solarRad.DF\$ts <- solarRad.DF\$ts + **5.5\*60\*60**
  - ⇒ L 443. pe.df.ETr <- pe.df.ETr[, **c(1, 5, 7, 12, 17, 18)**]  
**(# columns: "Sector", "Genotype", "Replicates", "LeafArea3D", "TS", "date" #)**