## Computational Stats

## TE Sem I Honors in AI/ML

### Academic Year: 2021-22

Lab Assignment No. 3

**Date: 06/09/2021**

**Problem Statement:**

* Load the dataset: birthwt Risk Factors Associated with Low Infant Birth Weight

1. Test the association of mother’s (age) age and baby’s birth weight (bwt) using the correlation test and linear regression.
2. Test the association of mother’s weight (weight) and birth weight (bwt) using the correlation test and linear regression.
3. Produce two scatter plots of:
   1. mother’s age by baby’s birth weight;
   2. mother’s weight by baby’s birth weight**.**

**Objective**

Elaborate the Conclusion based on the performed analysis.

**Dataset Description:**

Taken from [Stat Labs](http://stat-www.berkeley.edu/users/statlabs/) by Nolan and Speed, originally from the Child Health and Development Studies conducted at the Oakland, CA, Kaiser Foundation Hospital. The variables are

1. bwt: baby's weight in ounces at birth
2. gestation: duration of pregnancy in days
3. parity: parity indicator (first born = 1, later birth = 0)
4. age: mother's age in years
5. height: mother's height in inches
6. weight: mother's weight in pounds (during pregnancy)
7. smoke: indicator for whether mother smokes (1=yes, 0=no)