AL & AL Construction

Predicting Probability of Winning Project Bid:

Our company spends a lot of money every year in bidding on projects that we may or may not win. We hire consultants from different engineering firms to estimate the cost and time of building each project we bid on. We also invest in time to research the project to make an accurate bid.

Our company desires to make this process more efficient. We are asking your consultant group to build us a model to predict the probability that our company would win a bid on a project. With this information we could make more informed decisions on whether we need to invest time and money in bidding different projects.

We have provided a data set that contains our bid history over the past 3 years. This data is randomly compiled and does not have a time stamp, so no time analysis is possible. The data set contains the following variables:

- *Estimated Cost (Millions)*: Engineering firm's estimated cost of project.
- *Estimated Years to Complete*: Engineering firm's estimated completion time of project.
- *Bid Price*: The price AL & AL Construction bid on the project.
- *Sector*: 10 different construction sectors where we bid on projects.
    - 1: Transportation
    - 2: Lodging
    - 3: Multi-family Residential
    - 4: Amusement and Recreation
    - 5: Highway and Street
    - 6: Education
    - 7: Healthcare
    - 8: Manufacturing
    - 9: Power
    - 10: Military
- *Region of Country*: Region of country that the project is located.
- *Number of Competitor Bids*: The number of other companies bidding on the project.
- *Competitor A – J*: Binary variables on whether Company A through Company J made a bid on the project.
- *Win Bid*: Whether AL & AL Construction won the project bid.
- *Winning Bid Price*: The price of the winning bid on the project.