**Project Name**: Mortgage Delinquent

**Team Members:**

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**Domain:** Mortgage Delinquency/Default Rate Data

**Hypothesis:** To take key performance indicators and create a predicative model that will allow an accurate prediction of the default or delinquency rate of a mortgage within a 60-80% accuracy.

**Project Description:**

* Mortgage Delinquency/Default rate using key performance indicators (KPI) to build a data frame model which will be used for predictive analytics to determine delinquency/default of the mortgage along with current state of the economy.
* Utilizing statistical trend and regression analysis and methodologies to test the model. Utilizing test data to test the model to accurately forecast the probability that a mortgage with become delinquent/default.
* Present the results of the model indicating the accuracy of the model and the visualization of results.

Actions to be done:

* Collection of data to prime the machine learning model using the KPIs
  + See Data Sources
* Determine a valid scope of the data: utilization of the USA or a specific State
* Develop/research statistical algorithms to assist in statistical trend and regression analysis
* Determine the best algorithms to assist in predictive and forecasting actions
* Research academic papers noting methodologies and practices to create a predictive model
* Create a Data Science Pipeline
* Data balance from data sources to keep within scope of the project

Initial Data Sources:

<https://www.fhfa.gov/DataTools/Downloads/Pages/Public-Use-Databases.aspx>

<https://www.federalreserve.gov/data/mdrm.htm>

<https://www.federalreserve.gov/data.htm>

<https://www.fanniemae.com/portal/funding-the-market/data/loan-performance-data.html>

<https://fred.stlouisfed.org/categories/32440>

<https://www.consumerfinance.gov/data-research/mortgage-performance-trends/download-the-data/>

<https://www.consumerfinance.gov/data-research/hmda/historic-data/>

Questions and Further Exploration:

* Mortgage biases
* Intentionally be delinquent/default
* Where the correct KPIs selected to accurately predict mortgage delinquency/default
* Unknown Economic circumstances and/or life situations