# ADS Portfolio

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## Purpose of Report

The purpose of this report is to provide a reflection and review of whether the learning goals of the MS. Applied Data Science program were met and whether I have demonstrated competency in applying these goals throughout my academic career while attending Syracuse University. The learning goals of the program are listed as follows:

* Collect, store, and access data by identifying and leveraging applicable technologies
* Create actionable insight across a range of contexts (e.g. societal, business, political), using data and the full data science life cycle
* Apply visualization and predictive models to help generate actionable insight
* Use programming languages such as R and Python to support the generation of actionable insight
* Communicate insights gained via visualization and analytics to a broad range of audiences (including project sponsors and technical team leads)
* Apply ethics in the development, use and evaluation of data and predictive models (e.g., fairness, bias, transparency, privacy)

To accomplish this, I will be reviewing 4 projects which have been taken from four classes. The classes in question are IST692 Responsible AI, IST707 Applied Machine Learning, IST718 Big Data Analytics and IST737 Visual Analytics Dashboards. It is expected there will be some overlap of learning goals, however, I will highlight the strongest combination of skills that were learned in the process or completing these projects.

## Review of projects used in the report

As indicated in the purpose of report, I will be reviewing 4 projects across 4 different classes. But, before I do, it is important that I provide a brief overview and what particularly learning goal was achieved.

* IST682: Mortgage Approval with a focus on Gender – The purpose of this project was twofold, to generate a model which could adequately predict whether a user will secure a mortgage but it should also investigate and account for any gender disparities.

Learning goals:

* + Apply ethics in the development, use and evaluation of data and predictive models.
  + Create actionable insights across a range of contexts using data and the full data science life cycle
  + Communicate insights gained via visualizations and analytics to a broad range of audiences.
* IST707: NBA Predictor – The purpose of this project was to generate a model which could predict the winner of an NBA match and the spread (the difference in the score)

Learning goals:

* + Collect Store and access data by identifying and leveraging applicable technologies
  + Communicate insights gained via visualizations and analytics to a broad range of audiences.

Use of Python to support the generation of actionable insight

* IST718: Toxic Comment Discovery – The Toxic Comment Discovery is designed to find a novel approach to identifying toxic comments. It’s primary purpose was to develop a dataset that could be used to train other models to identify toxic comments.

Learning goals:

* + Collect Store and access data by identifying and leveraging applicable technologies
  + Apply visualization and predictive models to help generate actionable insight
  + Communicate insights gained via visualization and analytics to a broad range of audiences
* IST737:

Approach used in the report

Closing thoughts