**Predict if prescribed medication requires pre-authorization**

**Problem Statement:**

Our goal is to develop an engine, for doctors that tell whether prescribed medication will require a prior authorization or not. This helps the doctors prescribe those medicines that do not require Prior Authorization (PA) in turn increases the probability of purchasing the medication. This engine should be based on advanced machine learning technologies that looks at the past transactional data and predict with high degree of confidence whether a particular drug will require prior authorization for a particular patient or not. Also extract patterns of patients and drugs which require prior authorization, and the ability to analyze and understand what causes a drug to require prior authorization, and how to convert a drug that requires prior authorization to one that does not.

**Attributes Description:**

1. User ID, Doctor ID, Drug, Drug Class, Drug Sub class : IDs of the respective numbers
2. Drug\_Chemical\_Name: Id of the drug chemical name
3. State: ID of a geographical state in a country
4. TransDate: Transaction Date
5. BIN: Bank Identification Number is a six digit number (that tells where to send the claim for reimbursement)
6. PCN: Processor Control Number
7. RxGroupID : Prescription ID
8. NDC : National Drug Code
9. GPI : Indicator representing Generic Drug information (Eg: GPI Description\* • Bupropion HCl tab SR 12hr 150mg • Nicotine TD patch 24hr kit 21mg, 14mg, & 7mg/24hr )
10. Target: Whether a patient with the record needs PA or not