Identify the Predictors
- Demographics – Age, Sex
- Lab data – Includes lab tests
- Vitals – Includes BP, Sugar, Weight
- Visit types – Emergency, In-patient, outpatient
- Diagnosis & Diseases/ ailments – Heart, Pneumonia
- Previous hospital visit
- Length of stay

Process the Dataset
- Date fields – Validate the date
- Calculate the 30 days stay
- Refine the dataset for building Model/Analysis

Identify the Suitable Algorithm
- Gradient Boosting
- Random Forest
- Support Vector Machines
- Logistic Regression
- K-Nearest Neighbour
- Ridge

Build/Evaluate the Model
- Model is maintained dynamically
- Split the data into
  - Training set
  - Test set
- Build the model on training set
  - Model is serialized
  - ready for new datasets

Data for new evaluation
- New data sets are analysed
- Available in .CSV

Data Visualization
- .csv is converted into JSON format
- Displayed using Alten Calsoft UI framework
ABOUT ALTEN CALSOFT LABS

ALTEN Calsoft Labs is a next gen digital transformation, enterprise IT and product engineering services provider. The company enables clients innovate, integrate, and transform their business by leveraging disruptive technologies like mobility, big data, analytics, cloud, IoT and software-defined networking (SDN/NFV). ALTEN Calsoft Labs provides concept to market offerings for industry verticals like education, healthcare, networking & telecom, hi-tech, ISV and retail. Headquartered in Bangalore, India, the company has offices in US, Europe and Singapore. ALTEN Calsoft Labs is a part of ALTEN group, a leader in technology consulting and engineering services.

TECHNOLOGY USED

- **Business Platform**: Hadoop - Hortonworks
- **Paradigm**: Hive, MapReduce
- **Machine Learning Tools**: Scikit-Learn, R
- **Language**: Python, R

BUSINESS BENEFITS

Clinicians can be prepared to provide better post-discharge care for patients who are likely to get re-admitted.