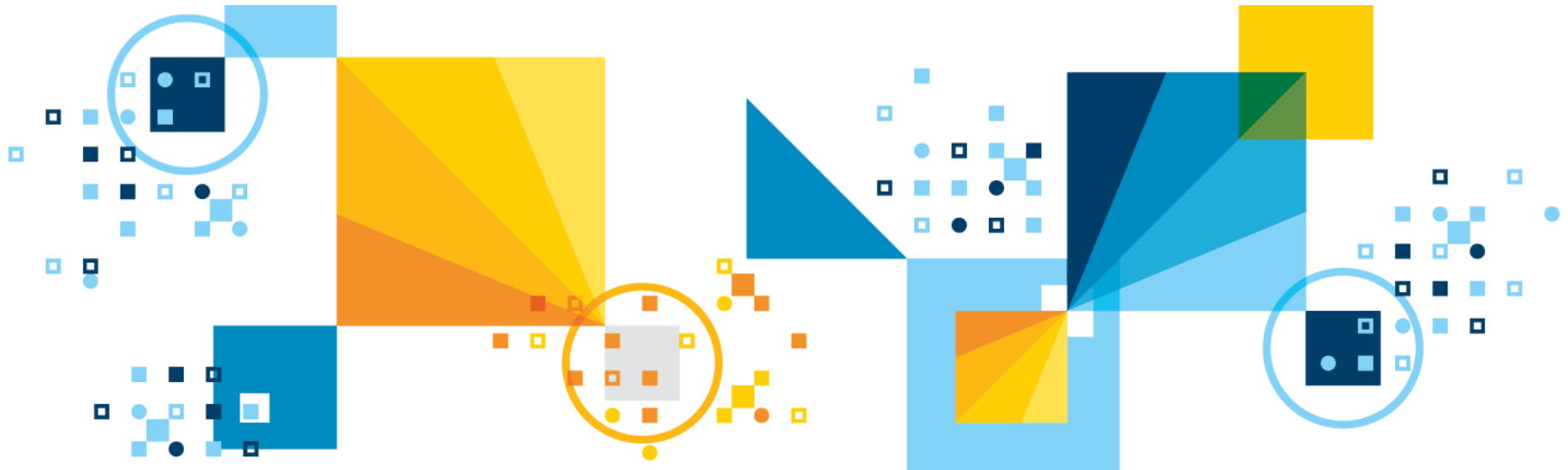


Predictive Modeling Fundamentals I

Lesson 5



Setting the Stage....

Why this is important to know...

1. Fundamental introduction to Data Mining and its application to business problems
2. Ability to utilize software tools for advanced analytics

After this session, you will be able to...

1. Understand common techniques and metrics for classification model evaluation
2. Apply predictive model on test and new data
3. Use SPSS Modeler to assess model performance and accuracy

Speaking to you today...



Armand Ruiz
Product Manager



Mikhail Lakirovich
Product Marketing Manager

Agenda

- Score new data
- Deployment of the Model
- What is IBM Bluemix?
- Predictive Modeling service: Deployment in the Cloud
- SPSS Collaboration and Deployment Services
- Lab 5

Review: Training/Testing and score new data

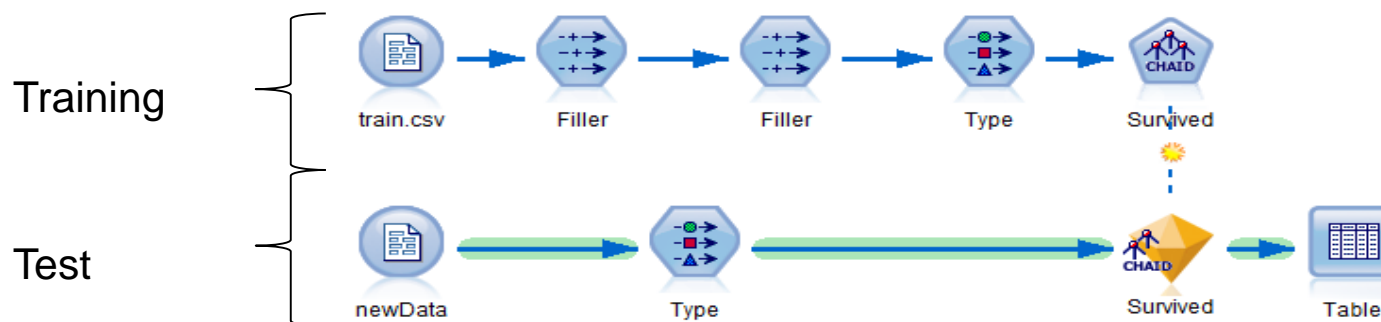
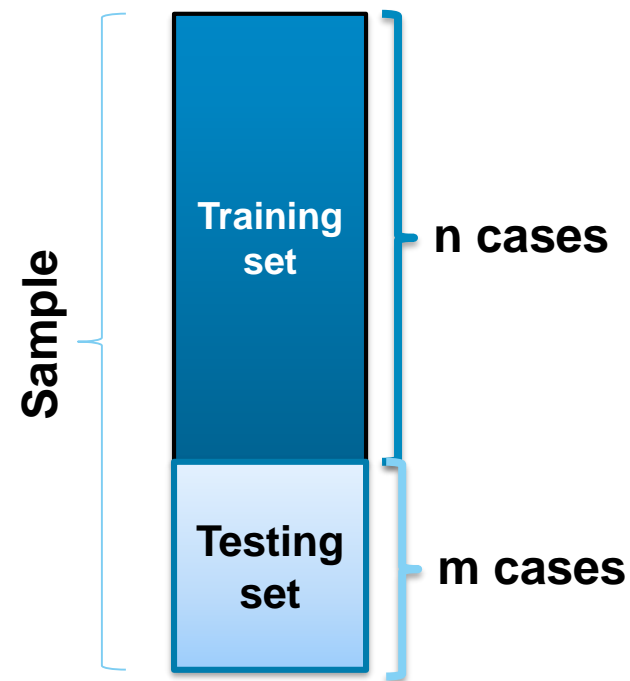
Split original sample into two parts **at random**:

- **Training set** (typically 60% to 80% of observations) to **estimate** the model,
- **Testing set** (the other 20% to 30% of obs) to **test the predictive performance** of the model.

Step1: Estimate model using training set

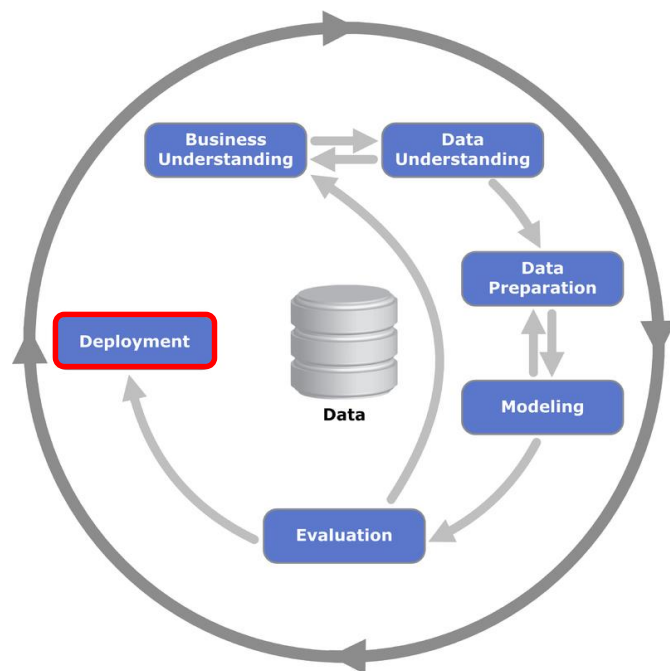
Step 2: Compute predictions on testing set and compare them with observed values.

REMARK: Need to have enough observations in the sample for splitting



Deployment of the Model

Creation of the model is generally not the end of the project. Even if the purpose of the model is to increase knowledge of the data, the knowledge gained will need to be organized and presented in a way that the customer can use it. Depending on the requirements, the deployment phase can be as simple as generating a report or as complex as implementing a repeatable data scoring (e.g. segment allocation) or data mining process. In many cases it will be the customer, not the data analyst, who will carry out the deployment steps. Even if the analyst deploys the model it is important for the customer to understand up front the actions which will need to be carried out in order to actually make use of the created models.



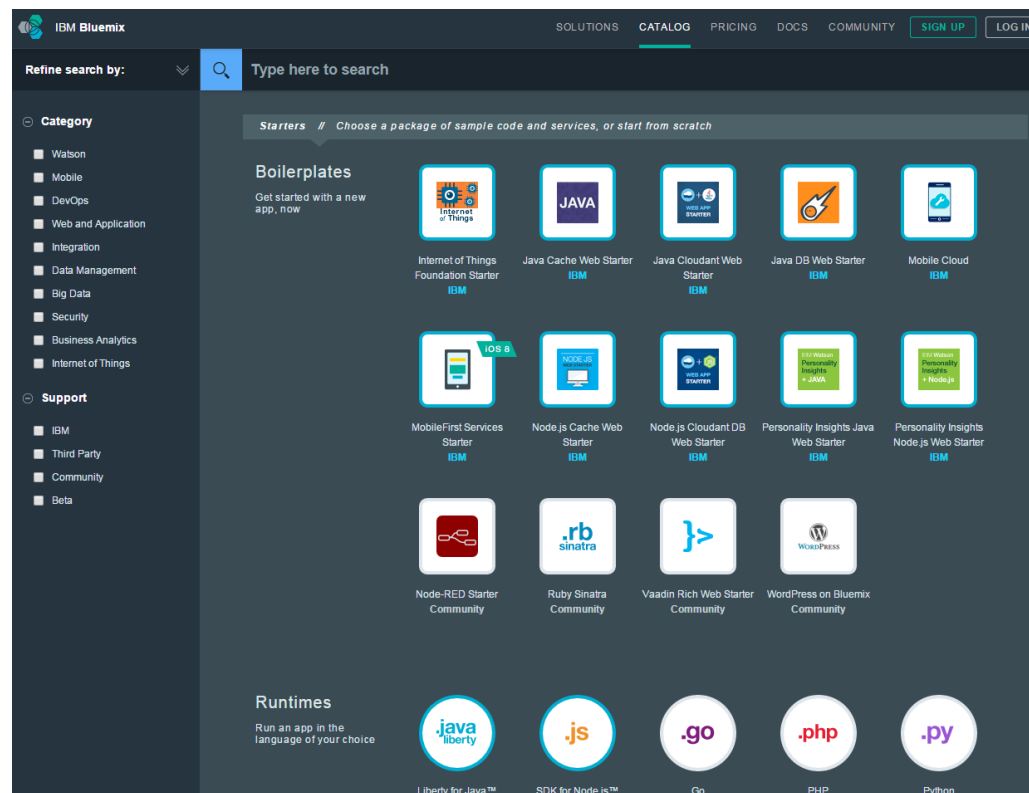
CRISP-DM

Solutions:


- IBM SPSS Solution Publisher
- IBM Bluemix Predictive Modeling (Cloud)**
- IBM Collaboration & Deployment Services

What is Bluemix?

- **PaaS (Platform as a Service) Environment**
 - Self-service application hosting environment
 - Bring your app, we'll host it for you
 - Deploy in seconds, not weeks or months
 - App developer focuses on their business logic, we worry about infrastructure
- **App developer shouldn't need to worry about**
 - Installing & managing the runtime, framework or even BM/laaS
 - Java, Ruby, PHP, Node,...
 - Liberty, Rails, Sinatra, Stand-alone
- **Managing & scaling of apps made easy (load-balancing too)**
 - Enables agile and continuous/rolling development/deployments and scaling
- **Based on CloudFoundry**
 - Open Source & IaaS Independent
 - No vendor lock-in
 - Strong, vibrant and growing community



Bluemix Predictive Modeling service



Predictive Modeling
IBM

PUBLISH DATE
2/24/2015

TYPE
Service

[VIEW DOCS](#)


BETA

The IBM Predictive Modeling service permits the integration of analytics with your applications. Bind your Bluemix apps to a Predictive Modeling service instance and generate the predictive analytics your app needs to deliver higher value to your users. You manage your models in the administration dashboard, and you may update or refresh your models using the dashboard without stopping or redeploying your apps. The focus of the IBM Predictive Modeling service is deployment, but note that IBM SPSS Modeler Client software is required for authoring and working with models and streams. A free trial software download of IBM SPSS Modeler Client will be provided in the GA time frame.

Pick a plan

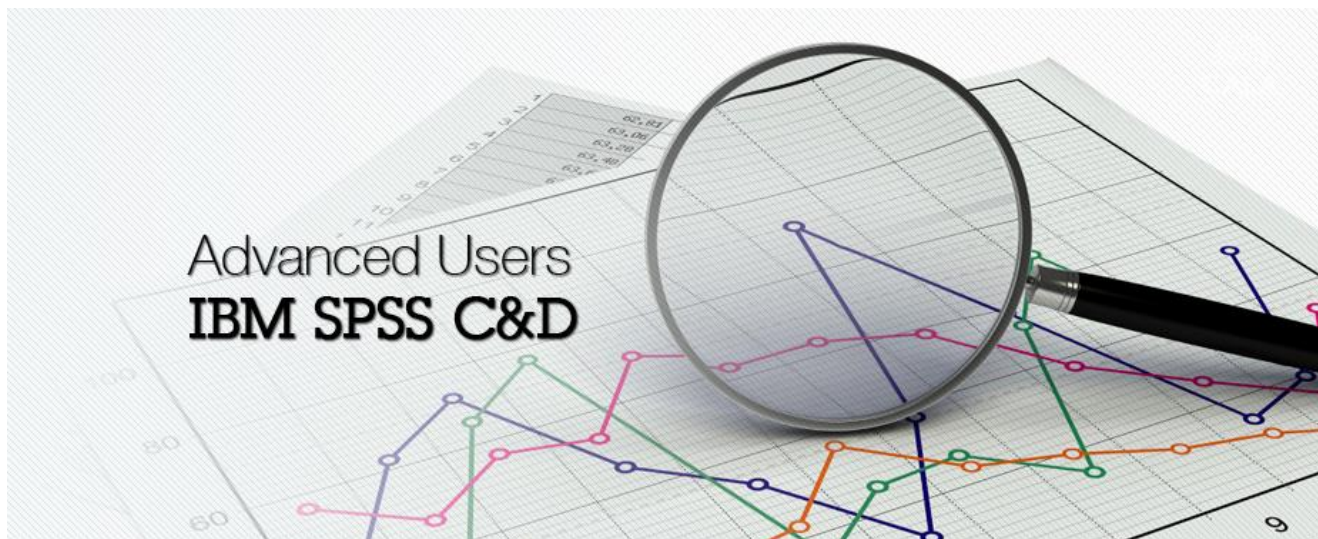
Monthly prices shown are for country or region: [United States](#)

Plan	Features	Price
✓ Free Plan	Shared Predictive Modeling Server	Free

 free plan



SPSS Collaboration and Deployment



- Collaborate:** you can develop and implement analytics across the enterprise.
- Automate:** so you can construct flexible analytical processes that can be deployed throughout your operations – ensuring consistent results.
- Deploy:** embedding analytic results in front-line business processes while integrating with your existing infrastructure with standard programming tools and interfaces.

<http://www-03.ibm.com/software/products/es/spss-collaboration>

Lab 5:

- Score new data in SPSS Modeler
- Deploy your model to IBM Cloud

