Connect - Predictive Analytics for Business Syllabus

Contact Info

While going through the program, if you have questions about anything, you can reach us at support@udacity.com. For help from Udacity Mentors and your peers visit the Udacity Classroom.

Nanodegree Program Info

Version: 2.0.0

Length of Program: 75 Days*

** This is a self-paced program and the length is an estimation of total hours the average student may take to complete all required coursework, including lecture and project time. Actual hours may vary.*

Part 1: Welcome to the program

Project: Predicting Diamond Prices

You will apply a framework to work through the problem and build a linear regression model to provide results and a recommendation.

Supporting Lessons

Lesson	Summary
Orientation	Welcome to the Predictive Analytics for Business Nanodegree program! In this lesson, you will learn more about the structure of the program and meet the team.
Knowledge and Career Support	You are starting a challenging but rewarding journey! Take 5 minutes to read how to get help with projects and content.
Get Help with Your Account	What to do if you have questions about your account or general questions about the program.

In this course, we give you a framework to help you organize and plan your analytical approach. We also introduce both simple Linear Regression and Multiple Linear Regression.

Project: Predicting Catalog Demand

You will apply a framework to work through the problem and build a linear regression model to provide results and a recommendation.

Supporting Lessons

Lesson	Summary
The Analytical Problem	In this course you'll learn strategies for solving problems, non-predictive data analysis, and more.
Selecting an Analytical Framework	Select the most appropriate analytical methodology based on the context of the business problem.
Linear Regression	Build, validate, and apply linear regression models to solve a business problem
Practice Project	Get hands on practice building a linear regression model.

Part 3: Data Wrangling

Data Wrangling is at the core of all data activity. In this course, you learn how to work with different data types, dirty data, and outliers. You will also learn how to reformat data and join data from different sources together.

Project: Create an Analytical Dataset

A pet store chain is selecting the location for its next store. You will use data preparation techniques to build a robust analytic dataset, then build a predictive model to select the best location.

Supporting Lessons

Lesson	Summary
Understanding Data	Understand the most common data types. Understand the various sources of data.
Data Issues	Identify common types of dirty data. Make adjustments to dirty data to prepare a dataset. Identify and adjust for outliers.
Data Formatting	Summarize, cross-tabulate, transpose, and reformat data to prepare a dataset for analysis.
Data Blending	Join and union data from different sources and formats.
Practice Project	Get hands on practice cleaning, blending, and preparing a dataset.

Part 4: Classification Models

Classification models are a powerful tool for business analysts. In this course, you learn more about binary and non-binary classification models and how to use them to drive business insights.

Project: Predicting Default Risk

A bank recently received an influx of loan applications. You will build and apply a classification model to provide a recommendation on which loan applicants the bank should lend to.

Supporting Lessons

Lesson	Summary
Classification Problems	Understand the fundamentals of classification modeling and how it differs from modeling numeric data
Binary Classification Models	Build logistic regression and decision tree models. Use stepwise to automate predictor variables selection. Score and compare models and interpret the results.
Non-Binary Classification Models	Build and compare forest and boosted models and interpret their results. Score and compare models and interpret the results.

Part 5: A/B Testing

Project: A/B Test a New Menu Launch

A chain of coffee shops is considering launching a new menu. You will design and analyze an A/B test and write up a recommendation on whether the chain should introduce the new menu.

Supporting Lessons

Lesson	Summary
A/B Testing Fundamentals	Understand the fundamentals of A/B testing, including selecting target and control units and variables and the duration of a test.
Randomized Design Tests	Select test and control variables and understand the importance of sample size. Design a randomized design A/B test and analyze the results.
Matched Pair Design Tests	Match test units to control units. Design a matched pair design A/B test and analyze the results.
Matched Pair Practice	Use trend and seasonality as control variables for a matched pair design A/B test.

Part 6: Time Series Forecasting

Part 7: Segmentation and Clustering

Project: Combining Predictive Techniques

After completing the project, you will feel comfortable combining predictive techniques and delivering results

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Generated Sat May 9 12:20:52 PDT 2020