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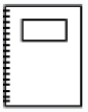
Business Analytics

About This Specialization

This Specialization provides an introduction to big data analytics for all business professionals, including those with no prior analytics experience. You'll learn how data analysts describe, predict, and inform business decisions in the specific areas of marketing, human resources, finance, and operations, and you'll develop basic data literacy and an analytic mindset that will help you make strategic decisions based on data. In the final Capstone Project, you'll apply your skills to interpret a real-world data set and make appropriate business strategy recommendations.

5 courses
Follow the suggested order or choose your own



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Business Analytics

Course 1

Customer Analytics

Upcoming Session: Dec 18

Commitment 4 weeks of study, 5-6 hours/week

Subtitles English, Spanish, Chinese (Simplified)

About the Course

Data about our browsing and buying patterns are everywhere. From credit card transactions and online shopping carts, to customer loyalty programs and user-generated ratings/reviews, there is a staggering amount of data that can be used to describe our past buying behaviors, predict future ones, and prescribe new ways to influence future purchasing decisions. In this course, four of Wharton's top marketing professors will provide an overview of key areas of customer analytics: descriptive analytics, predictive analytics, prescriptive analytics, and their application to real-world business practices including Amazon, Google, and Starbucks to name a few. This course provides an overview of the field of analytics so that you can make informed business decisions. It is an introduction to the theory of customer analytics, and is not intended to prepare learners to perform customer analytics.

Course Learning Outcomes:

After completing the course learners will be able to...

Describe the major methods of customer data collection used by companies and understand how this data can inform business decisions

Describe the main tools used to predict customer behavior and identify the appropriate uses for each tool

Communicate key ideas about customer analytics and how the field informs business decisions

Communicate the history of customer analytics and latest best practices at top firms

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Business Analytics

Week 1

Introduction to Customer Analytics

What is Customer Analytics? How is this course structured? What will I learn in this course? What will I learn in the Business Analytics Specialization? These short videos will give you an overview of this course and the specialization; the substantive lectures begin in Week 2.


Video · Course Introduction and Overview


Video · Overview of the Business Analytics Specialization

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Business Analytics

Week 2

Descriptive Analytics

In this module, you'll learn what data can and can't describe about customer behavior as well as the most effective methods for collecting data and deciding what it means. You'll understand the critical difference between data which describes a causal relationship and data which describes a correlative one as you explore the synergy between data and decisions, including the principles for systematically collecting and interpreting data to make better business decisions. You'll also learn how data is used to explore a problem or question, and how to use that data to create products, marketing campaigns, and other strategies. By the end of this module, you'll have a solid understanding of effective data collection and interpretation so that you can use the right data to make the right decision for your company or business.siness functions.

- Video · What is Descriptive Analytics?
- Video · Descriptive Data Collection: Survey Overview
- Video · Descriptive Data Collection: Net Promoter Score and Self-Reports
- Video · Descriptive Data Collection: Survey Design
- Video · Passive Data Collection
- Video · Media Planning
- Video · Causal Data Collection and Summary
- Quiz · Descriptive Analytics Quiz
- Reading · Descriptive Analytics Slides
- Reading · Additional Readings: Descriptive Analytics

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Business Analytics

Week 3

Predictive Analytics

Once you've collected and interpreted data, what do you do with it? In this module, you'll learn how to take the next step: how to use data about actions in the past to make to make predictions about actions in the future. You'll examine the main tools used to predict behavior, and learn how to determine which tool is right for which decision purposes. Additionally, you'll learn the language and the frameworks for making predictions of future behavior. At the end of this module, you'll be able to determine what kinds of predictions you can make to create future strategies, understand the most powerful techniques for predictive models including regression analysis, and be prepared to take full advantage of analytics to create effective data-driven business decisions.

- Video · Introduction to Predictive Analytics
- Video · Asking Predictive Questions
- Video · Regression Analysis, Part 1: The Demand Curve
- Video · Regression Analysis, Part 2: Making Predictions
- Video · Beyond Period 2
- Video · Making Predictions Using a Data Set
- Video · Data Set Predictions: Mary, Sharmila, or Chris?
- Video · Probability Models
- Video · Implementation of the Model
- Video · Results and Predictions
- Quiz · Predictive Analytics Quiz
- Reading · Reading: Customer Lifetime Value
- Reading · Predictive Analytics and Regression Analysis Slides
- Reading · Implementation of the Model Spreadsheet
- Reading · Additional Readings: Predictive Analytics

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Business Analytics

Week 4

Prescriptive Analytics

How do you turn data into action? In this module, you'll learn how prescriptive analytics provide recommendations for actions you can take to achieve your business goals. First, you'll explore how to ask the right questions, how to define your objectives, and how to optimize for success. You'll also examine critical examples of prescriptive models, including how quantity is impacted by price, how to maximize revenue, how to maximize profits, and how to best use online advertising. By the end of this module, you'll be able to define a problem, define a good objective, and explore models for optimization which take competition into account, so that you can write prescriptions for data-driven actions that create success for your company or business.

- Video · Introduction
- Video · What is Prescriptive Analytics?
- Video · Using the Data to Maximize Revenue
- Video · Parameters of the Model
- Video · Market Structure
- Video · Competition and Online Advertising Models
- Video · Conclusion(s)
- Quiz · Prescriptive Analytics Quiz
- Reading · Prescriptive Analytics Slides

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Business Analytics

Week 5

Application/Case Studies

How do top firms put data to work? In this module, you'll learn how successful businesses use data to create cutting-edge, customer-focused marketing practices. You'll explore real-world examples of the five-pronged attack to apply customer analytics to marketing, starting with data collection and data exploration, moving toward building predictive models and optimization, and continuing all the way to data-driven decisions. At the end of this module, you'll know the best way to put data to work in your own company or business, based on the most innovative and effective data-driven practices of today's top firms.


Video · Introduction to Application to Analytics


Video · The Future of Marketing is Business Analytics


Video · The Golden Age of Marketing


Video · Applications: ROI


Video · Radically New Data Sets in Marketing


Video · The Perils of Efficiency


Video · Analytics Applied: Kohl's, NetFlix, AmEx and more


Video · Conclusion


Quiz · Applications


Reading · Application/Case Study Slides


Reading · Additional Reading: the Power of Data

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Business Analytics

Course 2

Customer Analytics

Upcoming Session: Dec 18t

Commitment 4 weeks of study, 5-6 hours/week

Subtitles English, Chinese (Simplified)

About the Course

This course is designed to impact the way you think about transforming data into better decisions. Recent extraordinary improvements in data-collecting technologies have changed the way firms make informed and effective business decisions. The course on operations analytics, taught by three of Wharton's leading experts, focuses on how the data can be used to profitably match supply with demand in various business settings. In this course, you will learn how to model future demand uncertainties, how to predict the outcomes of competing policy choices and how to choose the best course of action in the face of risk. The course will introduce frameworks and ideas that provide insights into a spectrum of real-world business challenges, will teach you methods and software available for tackling these challenges quantitatively as well as the issues involved in gathering the relevant data.

This course is appropriate for beginners and business professionals with no prior analytics experience.

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Business Analytics

Week 1

Introduction, Descriptive and Predictive Analytics

In this module you'll be introduced to the Newsvendor problem, a fundamental operations problem of matching supply with demand in uncertain settings. You'll also cover the foundations of descriptive analytics for operations, learning how to use historical demand data to build forecasts for future demand. Over the week, you'll be introduced to underlying analytic concepts, such as random variables, descriptive statistics, common forecasting tools, and measures for judging the quality of your forecasts.

- Video · Course Introduction and Welcome
- Video · The Newsvendor Problem
- Video · Moving Averages
- Video · Trends, Seasonality
- Video · Week 1 Wrap-up, Apparel Industry
- Reading · Excel Files, Slides and Practice Problems
- Quiz · Newsvendor and Forecasting Quiz

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Business Analytics

Week 2

Prescriptive Analytics, Low Uncertainty

In this module, you'll learn how to identify the best decisions in settings with low uncertainty by building optimization models and applying them to specific business challenges. During the week, you'll use algebraic formulations to concisely express optimization problems, look at how algebraic models should be converted into a spreadsheet format, and learn how to use spreadsheet Solvers as tools for identifying the best course of action.

- Video · How to Build an Optimization Model
- Video · Optimizing with Solver
- Video · Network Optimization Example
- Video · (Optional) Week 2 Review
- Video · (Optional) Solver on Mac
- Video · (Optional) Solver in Google Sheets
- Reading · Excel Files, Slides, and Practice Problems
- Quiz · Decisions with Low Uncertainty Quiz

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Business Analytics

Week 3

Predictive Analytics, Risk

How can you evaluate and compare decisions when their impact is uncertain? In this module you will learn how to build and interpret simulation models that can help you to evaluate complex business decisions in uncertain settings. During the week, you will be introduced to some common measures of risk and reward, you'll use simulation to estimate these quantities, and you'll learn how to interpret and visualize your simulation results.

- Video · Comparing Decisions in Uncertain Settings
- Video · Simulating Uncertain Outcomes in Excel
- Video · Interpreting and Visualizing Simulation Output
- Video · (Optional) Week 3 Review
- Reading · Excel file, Slides, Practice Problems
- Quiz · Risk and Evaluation Quiz

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Business Analytics

Week 4

Prescriptive Analytics, High Uncertainty

This module introduces decision trees, a useful tool for evaluating decisions made under uncertainty. Using a concrete example, you'll learn how optimization, simulation, and decision trees can be used together to solve more complex business problems with high degrees of uncertainty. You'll also discover how the Newsvendor problem introduced in Week 1 can be solved with the simulation and optimization framework introduced in Weeks 2 and 3.

- Video · Decision Trees
- Video · Using Simulation with Decision Trees
- Video · Using Optimization Together with Simulation
- Video · Week 4 Wrap-up
- Video · (Optional) Session 4 Review
- Video · (Optional) Advanced Session on Optimization
- Reading · Excel files, Slides, and Practice Problems
- Quiz · Decision Tree Analysis Quiz

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Business Analytics

Course 3

People Analytics

Upcoming Session: Dec 18

Commitment	4 weeks of study, 1-2 hours/week
Subtitles	English

About the Course

People analytics is a data-driven approach to managing people at work. For the first time in history, business leaders can make decisions about their people based on deep analysis of data rather than the traditional methods of personal relationships, decision making based on experience, and risk avoidance. In this brand new course, three of Wharton's top professors, all pioneers in the field of people analytics, will explore the state-of-the-art techniques used to recruit and retain great people, and demonstrate how these techniques are used at cutting-edge companies. They'll explain how data and sophisticated analysis is brought to bear on people-related issues, such as recruiting, performance evaluation, leadership, hiring and promotion, job design, compensation, and collaboration. This course is an introduction to the theory of people analytics, and is not intended to prepare learners to perform complex talent management data analysis. By the end of this course, you'll understand how and when hard data is used to make soft-skill decisions about hiring and talent development, so that you can position yourself as a strategic partner in your company's talent management decisions. This course is intended to introduced you to Organizations flourish when the people who work in them flourish. Analytics can help make both happen. This course in People Analytics is designed to help you flourish in your career, too.

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Business Analytics

Week 1

Introduction to People Analytics, and Performance Evaluation

In this module, you'll meet Professors Massey, Bidwell, and Haas, cover the structore and scope of the course, and dive into the first topic: Performance Evaluation. Performance evaluation plays an influential role in our work lives, whether it is used to reward or punish and/or to gather feedback. Yet its fundamental challenge is that the measures we used to evaluate performance are imperfect: we can't infer how hard or smart an employee is working based solely on outcomes. In this module, you'll learn the four key issues in measuring performance: regression to the mean, sample size, signal independence, and process vs. outcome, and see them at work in current companies, including an extended example from the NFL. By the end of this module, you'll understand how to separate skill from luck and learn to read noisy performance measures, so that you can go into your next performance evaluation sensitive to the role of chance, knowing your environment, and aware of the four most common biases, so that you can make more informed data-driven decisions about your company's most valuable asset: its employees.

- Video · Introduction to People Analytics
- Video · Goals for the Course
- Video · Course Outline and Overview
- Video · People Analytics in Practice
- Video · Performance Evaluation: the Challenge of Noisy Data
- Video · Chance vs. Skill: the NFL Draft
- Video · Finding Persistence: Regression to the Mean
- Video · Extrapolating from Small Samples
- Video · The Wisdom of Crowds: Signal Independence
- Video · Process vs. Outcome
- Video · Summary of Performance Evaluation
- Quiz · Performance Evaluation Quiz
- Reading · Performance Analytics Slides PDF
- Reading · People Analytics in Action: Additional Reading

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Business Analytics

Week 2

Staffing

In this module, you'll learn how to use data to better analyze the key components of the staffing cycle: hiring, internal mobility and career development, and attrition. You'll explore different analytic approaches to predicting performance for hiring and for optimizing internal mobility, to understanding and reducing turnover, and to predicting attrition. You'll also learn the critical skill of understanding causality so that you can avoid using data incorrectly. By the end of this module, you'll be able to use data to improve the quality of the decisions you make in getting the right people into the right jobs and helping them stay there, to benefit not only your organization but also employee's individual careers.

- Video · Introduction to Professor Bidwell
- Video · Staffing Analytics Overview
- Video · Hiring 1: Predicting Performance
- Video · Hiring 2: Fine-tuning Predictors
- Video · Hiring 3: Using Data Analysis to Predict Performance
- Video · Internal Mobility 1: Analyzing Promotibility
- Video · Internal Mobility 2: Optimizing Movement within the Organization
- Video · Causality 1
- Video · Causality 2
- Video · Attrition: Understanding and Reducing Turnover
- Video · Turnover: Predicting Attrition
- Video · Staffing Analytics Conclusion
- Quiz · Staffing Quiz
- Reading · Staffing Analytics Slides PDF
- Reading · Staffing Analytics in Action: Additional Reading

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Business Analytics

Week 3

Collaboration

In this module, you'll learn the basic principles behind using people analytics to improve collaboration between employees inside an organization so they can work together more successfully. You'll explore how data is used to describe, map, and evaluate collaboration networks, as well as how to intervene in collaboration networks to improve collaboration using examples from real-world companies. By the end of this module, you'll know how to deploy the tools and techniques of organizational network analysis to understand and improve collaboration patterns inside your organization to make your organization, and the people working within in it, more productive, effective, and successful.

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- Video · Introduction to Professor Haas
- Video · Basics of Collaboration
- Video · Describing Collaboration Networks
- Video · Mapping Collaboration Networks
- Video · Evaluating Collaboration Networks
- Video · Measuring Outcomes
- Video · Intervening in Collaboration Networks
- Quiz · Collaboration Quiz
- Reading · Collaboration Slides PDF
- Reading · Collaboration Research in Action: Additional Readings

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Business Analytics

Week 4

Talent Management and Future Directions

In this module, you explore talent analytics: how data may be used in talent assessment and development to maximize employee ability. You'll learn how to use data to move from performance evaluation to a more deeper analysis of employee evaluation so that you may be able to improve the both the effectiveness and the equitability of the promotion process at your firm. By the end of this module, you'll will understand the four major challenges of talent analytics: context, interdependence, self-fulfilling prophecies, and reverse causality, the challenges of working with algorithms, and some practical tips for incorporating data sensitively, fairly, and effectively into your own talent assessment and development processes to make your employees and your organization more successful. In the course conclusion, you'll also learn the current challenges and future directions of the field of people analytics, so that you may begin putting employee data to work in a ways that are smarter, practical and more powerful.

- Video · Talent Analytics: The Importance of Context
- Video · Interdependence
- Video · Self-fulfilling Prophecies
- Video · Reverse Causality
- Video · Special Topics: Tests and Algorithms
- Video · Prescriptions: Navigating the Challenges of Talent Analytics
- Video · Course Conclusion: Organizational Challenges 1
- Video · Course Conclusion: Organizational Challenges 2 and Future Directions
- Video · Goodbye and Good Luck!
- Quiz · Talent Management Quiz
- Reading · Talent Analytics and Conclusion Slides PDF
- Reading · Talent Management in Action: Additional Readings

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Business Analytics

Course 5

Accounting Analytics

Upcoming Session: Dec 11

Commitment	4 weeks, 3 -5 hours per week
Subtitles	English, Mongolian

About the Course

Accounting Analytics explores how financial statement data and non-financial metrics can be linked to financial performance. In this course, taught by Wharton's acclaimed accounting professors, you'll learn how data is used to assess what drives financial performance and to forecast future financial scenarios. While many accounting and financial organizations deliver data, accounting analytics deploys that data to deliver insight, and this course will explore the many areas in which accounting data provides insight into other business areas including consumer behavior predictions, corporate strategy, risk management, optimization, and more. By the end of this course, you'll understand how financial data and non-financial data interact to forecast events, optimize operations, and determine strategy. This course has been designed to help you make better business decisions about the emerging roles of accounting analytics, so that you can apply what you've learned to make your own business decisions and create strategy using financial data.

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Business Analytics

Week 1

Ratios and Forecasting

The topic for this week is ratio analysis and forecasting. Since ratio analysis involves financial statement numbers, I've included two optional videos that review financial statements and sources of financial data, in case you need a review. We will do a ratio analysis of a single company during the module. First, we'll examine the company's strategy and business model, and then we'll look at the DuPont analysis. Next, we'll analyze profitability and turnover ratios followed by an analysis of the liquidity ratios for the company. Once we've put together all the ratios, we can use them to forecast future financial statements. (If you're interested in learning more, I've included another optional video, on valuation). By the end of this week, you'll be able to do a ratio analysis of a company to identify the sources of its competitive advantage (or red flags of potential trouble), and then use that information to forecast its future financial statements.

- Video · Module 1 Overview 1.0
- Video · Review of Financial Statements (Optional) 1.1
- Video · Sources for Financial Statement Information (Optional) 1.2
- Video · Ratio Analysis: Case Overview 1.3
- Video · Ratio Analysis: Dupont Analysis 1.4
- Video · Ratio Analysis: Profitability and Turnover Ratios 1.5
- Video · Ratio Analysis: Liquidity Ratios 1.6
- Video · Forecasting 1.7
- Video · Accounting-based Valuation (Optional) 1.8
- Quiz · Ratio Analysis and Forecasting Quiz
- Reading · PDF of Lecture Slides
- Reading · Excel Files for Ratio Analysis

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Business Analytics

Week 2

Earnings Management

This week we are going to examine "earnings management", which is the practice of trying to intentionally bias financial statements to look better than they really should look. Beginning with an overview of earnings management, we'll cover means, motive, and opportunity: how managers actually make their earnings look better, their incentives for manipulating earnings, and how they get away with it. Then, we will investigate red flags for two different forms of revenue manipulation. Manipulating earnings through aggressive revenue recognition practices is the most common reason that companies get in trouble with government regulators for their accounting practices. Next, we will discuss red flags for manipulating earnings through aggressive expense recognition practices, which is the second most common reason that companies get in trouble for their accounting practices. By the end of this module, you'll know how to spot earnings management and get a more accurate picture of earnings, so that you'll be able to catch some bad guys in finance reporting!which you will use in creating the investment portfolio for your final project as well as the comparison to the performance of a single stock.

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- Video · Module Overview: Earnings Management 2.0
- Video · Overview of Earnings Management 2.1
- Video · Revenue Recognition Red Flags: Revenue Before Cash Collection 2.2
- Video · Revenue Recognition Red Flags: Revenue After Cash Collection 2.3
- Video · Expense Recognition Red Flags: Capitalizing vs. Expensing 2.4
- Video · Expense Recognition Red Flags: Reserve Accounts and Write-Offs 2.5
- Quiz · Earnings Management
- Reading · PDFs of Lecture Slides
- Reading · Excel Files for Earnings Management

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Week 3

Big Data and Prediction Models

This week, we'll use big data approaches to try to detect earnings management. Specifically, we're going to use prediction models to try to predict how the financial statements would look if there were no manipulation by the manager. First, we'll look at Discretionary Accruals Models, which try to model the non-cash portion of earnings or "accruals," where managers are making estimates to calculate revenues or expenses. Next, we'll talk about Discretionary Expenditure Models, which try to model the cash portion of earnings. Then we'll look at Fraud Prediction Models, which try to directly predict what types of companies are likely to commit frauds. Finally, we'll explore something called Benford's Law, which examines the frequency with which certain numbers appear. If certain numbers appear more often than dictated by Benford's Law, it's an indication that the financial statements were potentially manipulated. These models represent the state of the art right now, and are what academics use to try to detect and predict earnings management. By the end of this module, you'll have a very strong tool kit that will help you try to detect financial statements that may have been manipulated by managers.

- Video · Module 3 Overview 3.0
- Video · Discretionary Accruals: Model 3.1
- Video · Discretionary Accruals: Cases 3.2
- Video · Discretionary Expenditures: Models 3.3
- Video · Discretionary Expenditures: Refinements and Cases 3.4
- Video · Fraud Prediction Models 3.5
- Video · Benford's Law 3.6
- Quiz · Big Data and Prediction Models
- Reading · PDFs of Lecture Slides
- Reading · Excel Files for Big Data and Prediction Models

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Business Analytics

Week 4

Linking Non-financial Metrics to Financial Performance

Linking non-financial metrics to financial performance is one of the most important things we do as managers, and also one of the most difficult. We need to forecast future financial performance, but we have to take non-financial actions to influence it. And we must be able to accurately predict the ultimate impact on financial performance of improving non-financial dimensions. In this module, we'll examine how to uncover which non-financial performance measures predict financial results through asking fundamental questions, such as: of the hundreds of non-financial measures, which are the key drivers of financial success? How do you rank or weight non-financial measures which don't share a common denominator? What performance targets are desirable? Finally, we'll look at some comprehensive examples of how companies have used accounting analytics to show how investments in non-financial dimensions pay off in the future, and finish with some important organizational issues that commonly arise using these models. By the end of this module, you'll know how predictive analytics can be used to determine what you should be measuring, how to weight very, very different performance measures when trying to analyze potential financial results, how to make trade-offs between short-term and long-term objectives, and how to set performance targets for optimal financial performance.


Video · Introduction: Connecting Numbers to Non-financial Performance Measures 4.0


Video · Linking Non-financial Metrics to Financial Performance: Overview 4.1


Video · Steps to Linking Non-financial Metrics to Financial Performance 4.2


Video · Setting Targets 4.3


Video · Comprehensive Examples 4.4


Video · Incorporating Analysis Results in Financial Models 4.5


Video · Using Analytics to Choose Action Plans 4.6


Video · Organizational Issues 4.7


Quiz · Linking Non-financial Metrics to Financial Performance


Reading · PDF of Lecture Slides


Reading · Expected Economic Value Spreadsheet

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Business Analytics

Course 5

Introduction to Spreadsheets and Models

Upcoming Session: Dec 19

Commitment 4 weeks of study, 4-5 hours/week

Subtitles English

About the Course

The Business Analytics Capstone Project gives you the opportunity to apply what you've learned about how to make data-driven decisions to a real business challenge faced by global technology companies like Yahoo, Google, and Facebook. At the end of this Capstone, you'll be able to ask the right questions of the data, and know how to use data effectively to address business challenges of your own. You'll understand how cutting-edge businesses use data to optimize marketing, maximize revenue, make operations efficient, and make hiring and management decisions so that you can apply these strategies to your own company or business. Designed with Yahoo to give you invaluable experience in evaluating and creating data-driven decisions, the Business Analytics Capstone Project provides the chance for you to devise a plan of action for optimizing data itself to provide key insights and analysis, and to describe the interaction between key financial and non-financial indicators. Once you complete your analysis, you'll be better prepared to make better data-driven business decisions of your own

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Business Analytics

Week1

Module 1: Capstone Project Topic - The Problem of Adblocking

The Business Analytics Specialization was designed to help you learn how to think about using data in making big (and small) business decisions. In this Capstone project, you'll be asked to create a strategy for a fictional digital search engine and content provider, GoYaFace, Inc. (often abbreviated as "GYF"). The strategy will be used in responding to the increasing popularity and availability of "adblocking" software, which could have significant negative repercussions for GYF's business. You are to assume the role of the leader of the Digital Advertising Tactics and Action ("DATA") Team at GYF, which has been assigned the job of formulating GYF's strategy in responding to the threat of adblocking. Your task is to develop a strategy that will be recommended to GYF's senior leadership. Using what you've learned about business analytics, you'll (i) create a detailed problem statement focusing on GYF's ad-buying customers (Module 2), (ii) develop a strategy (Module 3), (iii) describe the anticipated effects of the strategy (Module 4), and (iv) form a plan for measuring the effects of your strategy (Module 4). You'll then put these four pieces together into a final project (Module 5). First, please read the full description of the project in the "Project Description" link below, and then look at the background information about adblockers and the "GYF Company Profile" link in the content for Module 1. When you are ready to begin the first assignment, please move on to Module 2: Defining the Problem.

- Reading · Start Here! Project Description: Business Analytics Capstone
- Reading · GYF Company Profile
- Reading · The Importance of Mobile Advertising
- Reading · Further Exploration into Online Advertising Response Models
- Reading · How Internet Ads Work
- Reading · Project Template
- Other · Introductions

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Business Analytics

Modul 2: Defining the Problem

In Module 2, you'll define the problem adblockers poses for GYF. GYF is intended to be a composite of leading internet platform and content providers who derive substantial revenues from mobile advertising like Google, Yahoo, and Facebook, so you should frame your research around the real-world problems these companies have faced and are facing. Defining the problem thoroughly will have a direct impact on how successful your strategy will be received by your peers. The more deeply you consider the effects of adblockers on the companies that buy advertising space from GYF, the more appropriate your overall strategy is likely to be. Please use the resources below to find out more about the problem, and then create your Problem Statement and submit it for peer review below. You can and should draw from all of the Business Analytics Specialization courses, but your Problem Statement should focus on how adblockers might adversely affect GYF's relationship with the companies that pay GYF to place advertisements on GYF's mobile applications and content. You should consider the issue of causality in your Problem Statement - we've included some lectures from the underlying courses to refresh you on that topci. And you are strongly encouraged to complete and include a response to Application Exercise 1 (see link below) as part of your Problem Statement.

- Reading · Definition of the Adblocking Problem
- Reading · Whiting Out the Ads, but at What Cost?
- Reading · Apple's Support of Adblocking
- Reading · Why Adblockers Are Spurring a New Technology Arms Race
- Reading · Application Exercise 1 – Recommending Customer Analytics Research Methods to Explore Your Problem
- Other · Approaching Problems with an Analytical Mindset
- Peer Review · Problem Statement
- Video · What is Descriptive Analytics? (Customer Analytics)
- Video · Descriptive Data Collection (Customer Analytics)
- Video · Passive Data Collection (Customer Analytics)
- Video · Beyond Period 2 (Customer Analytics)
- Video · Causality 1 (People Analytics)
- Video · Causality 2 (People Analytics)
- Video · Reverse Causality (People Analytics)
- Video · Causal Data Collection and Summary (Customer Analytics)

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Business Analytics

Week 2

Module 3: Your Strategy

In Module 3, you will focus on creating your recommended strategy for GYF to address adblockers. Your strategy does not have to be lengthy, but it must be clear, and it must address the problem. (Hint: if you have a clearly defined problem, your strategy is much more likely to be clearly defined as well). You'll be submitting your strategy for peer review, and then also reviewing the work of at least 3 of your peers. It's OK if reviewing the strategies of other learners in this course gives you further ideas for revising your own strategy. One of the primary benefits of peer review is to expand the range of feedback you can get, and we designed this Module around peer review so that you can get as much feedback as possible before moving on to the next phase of the project. You may find the resources and lectures below helpful in formulating your strategy and considering how data can be leveraged and appropriately understood. You are strongly encouraged to complete and include your response to Application Exercise 2 as part of your Strategy.

- Reading · Does Your Strategy Need a Strategy?
- Reading · How Advertisers Can Beat Adblockers
- Reading · Application Exercise 2 - Using People Analytics Methods to Hire a Leader to Implement Your Strategy
- Other · The Importance of Execution in Strategy
- Peer Review · Strategy
- Video · Performance Evaluation: the Challenge of Noisy Data (People Analytics)
- Video · Finding Persistence: Regression to the Mean (People Analytics)
- Video · Extrapolating from Small Samples (People Analytics)
- Video · The Wisdom of Crowds: Signal Independence (People Analytics)
- Video · Process vs. Outcome (People Analytics)
- Video · Hiring 1 (People Analytics)
- Video · Hiring 2 (People Analytics)

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Business Analytics

Week 3

Module 4: Effects of Your Strategy/Measuring these Effects

Module 4 was designed to give you the opportunity to focus on the effects of your strategy. Effects and Measurement can be often overlooked in strategy development; creating a thoughtful and thorough plan for measuring the effects will improve your final project tremendously. In this part of the project, you will describe two events: what you think will happen and how you will measure it. Look to the courses in the Business Analytics Specialization to see what kind of data companies use to measure effects to create a measurement plan of your own. You are strongly encouraged to complete and include your responses to Application Exercises 3 and 4 as part of your Effects and Measurement components. You may create a scenario (Operations Analytics) to predict some of the intended effects of your strategy, either following the outline of Application Exercise 3, or of your own design. Once you submit your own plan for effects and measurement, please review the work of at least three of your peers. You may find new ideas, or new ways of looking at data and measurement from this exercise. We encourage you to incorporate what you've learned into your final submission!

- Reading · Resources for Thinking About Effects and Outcomes
- Reading · Application Exercise 3 - Using Operations Analytics Methods to Understand the Allocation of Scarce Resources in Pursuing a Strategy
- Reading · Application Exercise 3 Spreadsheet
- Reading · Application Exercise 4 - Using Accounting Analytics Methods to Measure the Key Drivers of Your Proposed Strategy
- Other · Questions and Tips for Your Fellow Learners
- Peer Review · Effects and Measurement Metrics
- Video · The Newsvendor Problem (Operations Analytics)
- Video · How to Build an Optimization Model (Operations Analytics)
- Video · Optimizing with Solver (Operations Analytics)
- Video · Simulating Uncertain Outcomes in Excel (Operations Analytics)
- Video · Decision Trees (Operations Analytics)
- Video · Linking Non-financial Metrics to Financial Performance: Overview (Accounting Analytics)
- Video · Steps to Linking Non-financial Metrics to Financial Performance (Accounting Analytics)
- Video · Incorporating Analysis Results in Financial Models (Accounting Analytics)

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Week 4

Module 5: Final Project Submission

In this final Module, you will combine the four revised elements of your presentation (Problem Statement, Strategy, Effects, and Measurement, including any responses to the Application Exercises you've completed) into one presentation and submit it for peer review. You'll then be asked to review the work of at least three of your peers. Once you have gotten feedback on your plan, you may use it as an example of strategic thinking at your current job, or as a work sample when you are applying for a new one. A successful strategic analysis which describes the use of data-driven decision making will make you much more marketable in almost any field. Good luck!


Other · Putting Analytics into Action


Peer Review · Final Project: Complete Strategic Analysis


Video · Applications: ROI (Customer Analytics)


Video · Radically New Data Sets in Marketing (Customer Analytics)


Video · Analytics Applied: Kohl's, Netflix, AmEx and more (Customer Analytics)