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JAVERIANA
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**UNIVERSITY OF
SAN FRANCISCO**

CHANGE THE WORLD FROM HERE

Big Data Strategy and Visualization

International Summer

JUNE · 16-22 · COURSE 2019

Social media analytics, web-tracking, device sensors, wearable computing and other technologies enable organizations to acquire, manage and analyze massive amounts of data to better understand their customers, products, competition, and markets. Armed with the insights gleaned from big data, companies can improve customer experience and products, optimize key business processes and uncover new monetization opportunities. The course will focus on teaching how combining existing and new sources of data with advanced analytics can power new business opportunities. Students will learn techniques, with a how-to guide that shows them how to leverage big data to drive business value.

Full of practical techniques, real-world examples, and hands-on exercises, this course will explore the technologies involved, as well as how to find areas within the organization that can take full advantage of big data.

Class Schedule

July 8 - July 12 | 6:00 pm - 09:00 pm

July 13 | 9:00 am - 12:00 pm

OFFICE HOURS: Monday - Friday 5:00 - 5:50 pm

Instructional Objectives



The **learning goals** of this course are focused on the key aspects of basic and advanced analytical work performed by business school graduates and include the following abilities:

- Decomposes current business strategies in order to link big data initiatives to the organization's value creation processes
- Explores different value creation processes and models by using software tools to create various data visualizations
- Teaches envisioning and facilitation techniques for ensuring organizational alignment around a big data initiative
- Discusses different architectural approaches that take advantage of new big data technology innovations
- Explains issues surrounding operationalizing big data, including organizational structures, education challenges, and new big data-related roles
- Explains issues surrounding operationalizing big data, including organizational structures, education challenges, and new big data-related roles
- Understand the principles of creating effective mockups and its effect on operationalizing analytics-driven decision making
- Provides methodology worksheets and exercises so readers can apply techniques
- Includes real-world examples from a variety of organizations leveraging big data

Materials

Required:

- Go to www.tableau.com/academic/students you can either download the software for Windows or MAC
- *Articles & Business Cases*: Emailed to students and may be available in the Faculty DropBox
- Online Clips Superstore <http://www.tableau.com/learn/starter-kit>
- Online Clips General Training <https://www.tableau.com/learn/training>

Recommended

- *Textbook*: Big Data MBA: Driving Business Strategies with data Science, by Bill Schmarzo, ISBN: 978-1-119-18111-8
- *Textbook*: Big Data: Understanding How Data Powers Big Business, by Bill Schmarzo, ISBN: 978-1-118-73957-0
- *Blog*: https://infocus.emc.com/author/william_schmarzo/

Policies and Requirements:

STUDENTS IN THIS COURSE WILL BE EVALUATED BASED ON THEIR PERFORMANCE ON THE FOLLOWING COMPONENTS:

ASSIGNMENT/GRADING ITEM	PERCENTAGE
In-Class Group Wk & Discussion	30% (3 @ 10%)
Group HW in Tableau	30% (3 @ 10%)
Final Presentation	40%

Assignments are due when allocated, regardless of your presence or absence. It is your responsibility to meet this deadline. For a successful experience in this class, please pay careful attention to your planning and accountability regarding assignments.

Attendance: This course has interactive and participatory aspects and contain both individual and group applications. Your presence, involvement, and contributions are regarded as an essential part of your creative learning and as equally essential to the learning of others. Attendance, preparation, and participation are expected and are included in your final evaluation.

+ Grading

GRADES ARE BASED ON ON A SCALE FROM 0 TO 100 PERCENT

ASSIGNMENT/GRADING ITEM	DUE DATE	PERCENTAGE
Group Reading Discussion	July 9	10%
Group Reading Discussion	July 10	10%
Group HomeWork	July 10	10%
Group Reading Discussion	July 11	10%
Group HomeWork	July 11	10%
Group HomeWork	July 12	10%
Group Presentation	July 13	50%

Policy on Incompletes: An Incomplete grade is not an option that you can select because you find that you weren't able to get everything done. The purpose of an incomplete is to provide a reasonable time extension for a student who cannot complete the course requirements by the usual time because of some bona fide emergency (an illness requiring hospitalization, etc.). Incompletes are generally unproductive for both the student and the instructor. They should be avoided if at all possible

Extra Credit: Extra credit is not available in this course.

Academic Misconduct Policy:

Certain student behavior will result in the lowering of the course grade by at least one point level. These behaviors include, but are not limited to:

- Intentional disruption, obstruction, or interference with the process of instruction
- Dishonesty, including cheating, knowingly furnishing false information, or plagiarism

Plagiarism: According to APA's publication manual (1994),

"Quotation marks should be used to indicate the exact words of another" (p. 292) "Each time a source is paraphrased, a credit for the source needs to be included in the text." (p. 294) The key here is not to present the work of another as being your own.

Otherwise, it is considered plagiarism.

Otherwise, it is considered plagiarism

By accepting this contract, students agree that papers may be submitted to a plagiarism detection software. Papers will only be submitted if there exists a suspicion of plagiarism. Students may receive a zero for a written assignment if plagiarism is identified.

Expected Classroom Behavior:

- Participating in class activities
- Respecting the diversity of cultures, opinions, viewpoints in the classroom
- Listening to fellow students, professors, and lecturers with respect
- Prepared for class

Course Syllabus

JULY 8

General information

Course Logistics

- Introduction to Students, Professor, and course
- Overview of Course and Learning Goals
- Homework Guidelines
- Creating and Managing Study Groups

Understand the principles of creating and evaluating effective data visualizations

- Introduction to Big Data
- Introduction to Data Visualization
- Reading assignments

Watch Clips www.tableau.com/learn/starter-kit

- Getting Started (23 Min)
- Getting Started with Data (6 Min)

JULY 9

General information

Basic Charts and Plots, Multivariate Data Visualization

- Creating Visual Analytics
- Connecting to your data

Basic Charts and Plots, Multivariate Data Visualization

- Identifying "What's Important?" to your organization/client. Examples...?

Apply Principles of Perception, Color, Design, and Evaluation

Watch Clips www.tableau.com/learn/starter-kit

- Getting Started with Visual Analytics (6 Min)
- Maps in Tableau (4 Min)

Read Cases/Whitepapers/Articles

- The Story of one chart in three charts
- Data Visualization Guide

JULY 10

General information

Basic Charts and Plots, Multivariate Data Visualization

- Describing common design issues in a visualization
- Big data analysis and its effect on decision making
- Data Cleansin

Basic Charts and Plots, Multivariate Data Visualization

- Apply Principles of Perception, Color, Design, and Evaluation

Watch Clips www.tableau.com/learn/starter-kit

- Grouping (5 Min)
- Sorting (4 Min)
- Ways to Filter (3 Min)

Read Cases/Whitepapers/Articles

- Fostering a Data Driven Culture
- How Big Data Is Changing The Way You Fly

JULY 11

General information

Story Telling Using Dashboards

- Creating and sharing visualizations files
- Various Advanced Charts

Watch Clips www.tableau.com/learn/starter-kit

- Getting Started with Calculations (4 min)
- Intro to Table Calculations (6 min)

Read Cases/Whitepapers/Articles

- DataVisualization-5 Most Influential Data Visualizations

Course Syllabus

JULY 12

General information

How it fits all together

- You will give a formal presentation of your work and obtain feedback and new insights.
- As a senior business analyst using BI tools, you will be making a presentation to senior executives to summarize the data you were provided in a story telling format supported by various charts by making recommendations and providing insights for the company to be more competitive.
- Students Presentations. Focus on the followings:
 - o What is the main insight that your CEO may draw from this visual file?
 - o What additional charts / visualization are needed to draw a sound conclusion?

Watch Clips www.tableau.com/learn/starter-kit

- Dashboard Interactivity using Actions (6 min)
- Adding Actions to Dashboards (10 min)

JULY 13

Course Syllabus

	Course Schedule	Read before Coming to Class	HW Due
1	<p>Course Logistics</p> <ul style="list-style-type: none"> · Introduction to Students, Professor, and course · Overview of Course and Learning Goals · Homework Guidelines · Creating and Managing Study Groups <p>Understand the principles of creating and evaluating effective data visualizations</p> <ul style="list-style-type: none"> · Introduction to Big Data · Introduction to Data Visualization 	<p>Read Cases/ Whitepapers/ Articles</p> <ul style="list-style-type: none"> · The Story of one chart in three charts <p>Watch Clips www.tableau.com/learn/starter-kit</p> <ul style="list-style-type: none"> · Getting Started (23 Min) · Getting Started with Data (6 Min) 	<p>In Class Discussion Class 1</p>
2	<p>Basic Charts and Plots, Multivariate Data Visualization</p> <ul style="list-style-type: none"> · Creating Visual Analytics · Connecting to your data <p>Basic Charts and Plots, Multivariate Data Visualization</p> <ul style="list-style-type: none"> · Identifying “What’s Important?” to your organization/client. Examples...? · Apply Principles of Perception, Color, Design and Evaluation 	<p>Read Cases/ Whitepapers/ Articles</p> <ul style="list-style-type: none"> · Creating Visual Analytics · Fostering a Data Driven Culture <p>Watch Clips www.tableau.com/learn/starter-kit</p> <ul style="list-style-type: none"> · Getting Started with Visual Analytics (6 Min) · Maps in Tableau (4 Min) 	<p>In Class Discussion Class 2</p> <p>Tableau HW Due</p>
3	<p>Understand the principles of creating and evaluating effective data visualizations</p> <ul style="list-style-type: none"> · Describing common design issues in a visualization · Big data analysis and its effect on decision making · Data cleansing <p>Basic Charts and Plots, Multivariate Data Visualization</p> <ul style="list-style-type: none"> · Apply Principles of Perception, Color, Design and Evaluation 	<p>Read Cases/ Whitepapers/ Articles</p> <ul style="list-style-type: none"> · How Big Data is Changing The Way You Fly <p>Watch Clips www.tableau.com/learn/starter-kit</p> <ul style="list-style-type: none"> · Grouping (5min) · Sorting (4min) · Ways to filter (3min) 	<p>Class discussion Class 3</p> <p>Tableau HW Due</p>

Course Syllabus

	Course Schedule	Read before Coming to Class	HW Due
4	<p>Story Telling Using Dashboards</p> <ul style="list-style-type: none"> · Creating and sharing visualizations files · Various Advanced Charts 	<p>Read Cases/ Whitepapers/ Articles</p> <ul style="list-style-type: none"> · DataVisualization-5 Most Influential Data Visualizations <p>Watch Clips www.tableau.com/learn/starter-kit</p> <ul style="list-style-type: none"> · Getting started with Calculations (4min) · Intro to Table Calculations (6min) 	<p>In Class Discussion Class 4</p> <p>Tableau HW Due</p>
5	<p>How it fits all together</p> <ul style="list-style-type: none"> · You will give a formal presentation of your work and obtain feedback and new insights · As a senior business analyst using BI tools, you will be making a presentation to senior executives to summarize the data you were provided in a story telling format supported by various charts by making recommendations and providing insights for the Company to be more competitive. · Students presentations. Focus on the following: <ol style="list-style-type: none"> 1. What is the main insight that your CEO may draw from this visual file? 2. What additional charts / visualization are needed to draw a sound conclusion? 	<p>Read Cases/ Whitepapers/ Articles</p> <p>Watch Clips www.tableau.com/learn/starter-kit</p> <ul style="list-style-type: none"> · Dashboard Interactivity using actions (6 min) · Adding Actions to Dashboards (10min) 	<p>In Class Discussion Class 5</p> <p>Tableau HW Due</p>
6	<p>Students Personations</p>		