

DATA SCIENCE AND ANALYTICS  
PROFESSIONAL BOOTCAMP

# Visual Communications



## COURSE SYLLABUS

# TABLE OF CONTENTS

<b>Course Details</b>	<b>3</b>
Duration	3
Course Description	3
Learning Goals	3
Learning Objectives	3
<b>Requirements</b>	<b>4</b>
Course Completion Requirements	4
Software	4
<b>Grading</b>	<b>4</b>
Assessment Scale	4
Assignment Rubric	5
Project Rubric	5
<b>Course Outline</b>	<b>6</b>
Class Details	6
Class Assignments	7

# COURSE DETAILS

## Duration

18 hours • 5 modules

## Course Description

In this visual communications course, learners will become familiar with visual dynamics and the visual options available to express data insights. They'll apply their knowledge to real-world examples where they'll be tasked to create data visualizations that align with their data insight goals as they engage with stakeholders in the most visually effective ways.

Learners will begin by investigating common visual dynamics and the effects they have on viewers. They'll discover how to choose the right visuals to express specific data goals and/or compare data. They'll examine the structures of data charts, infographics, and dashboards.

With this knowledge, they can express their data visually for optimal communication with stakeholders. The course will culminate in a dashboard-building project that integrates a data story flowchart (data stories were learned in the Data Storytelling course). This project will be presented to the class in groups and peer-reviewed.

Before taking Visual Communications, learners should have the following:

- Excel software
- Free account in Miro and Tableau Public

## Learning Goals

By the end of this course, you will know how to choose the right visualization to best express your data insights to effectively communicate and engage your stakeholders.

## Learning Objectives

- Examine visual dynamics and how they engage the viewer
- Identify context and purpose in a data visualization
- Survey the options and reasons to use charts, infographics, and dashboards
- Create data charts and dashboards according to your data goals

# REQUIREMENTS

## Course Completion Requirements

- Receive 18–24 points for class participation
- Receive a minimum of 12 points for the final project
- Attendance of at least 80%

## Software

To complete the course, students need the following:

- Computer with access to the internet
- Web browser
- Excel
- Free online accounts with Miro and Tableau Public

# Grading

## Assessment Scale

Assessment	Points	% of Grade	# of Assessments	Cumulative Pts
Quizzes	10	70%	4	40
Final Project	12 (18 max)	30%	1	12 (+6 extra)
			<b>Points Possible</b>	<b>58</b>

## Activities Rubric

Criteria	Incomplete	Complete	Score
Effort	Failed to meet all requirements	Met all requirements	Out of 4 points

## Project Rubric

Below is the final rubric that your instructor will use to grade your project. A perfect score is equivalent to meeting expectations in every category. Exceeding expectations in a category earns one bonus point. To pass the project, you must earn at least 75% of the possible points (29/39 points) on the rubric (where applicable) and for non-numeric grading, the required submissions of materials and other actions need to be performed.

	<b>0—No Submission</b>	<b>1—Does Not Meet Expectations</b>	<b>2—Meets Expectations</b>	<b>3—Exceeds Expectations</b>
<b>Data Storytelling &amp; Insights Points</b>	Learner did not check the Final Project Presentation Rubric and integrate any of the items from the Data Storytelling & Insights section	Learner integrated fewer than 29 items from the Data Storytelling & Insights section	Learner integrated 29 or more items from the Data Storytelling & Insights section	Learner integrated all items from the Data Storytelling & Insights section
<b>Visual Design &amp; Communication Points</b>	Learner did not check the Final Project Presentation Rubric and integrate any of the items from the Visual Design & Communication section	Learner integrated fewer than 17 items from the Visual Design & Communication section	Learner integrated 17 or more items from the Visual Design & Communication section	Learner integrated all items from the Visual Design & Communication section
<b>Dashboard in Miro</b>	Learner did not submit a dashboard created in Miro	Learner did not include all of the minimum requirements as outlined in the Final Project Guide (step 2, number 5)	Learner included all of the minimum requirements as outlined in the Final Project Guide (step 2, number 5)	Learner included extra dashboard elements or design choices
<b>Flowchart in Miro</b>	Learner did not submit a flowchart created in Miro	Learner did not include all of the minimum requirements as outlined in the Final Project Guide (step 2, number 6)	Learner included all of the minimum requirements as outlined in the Final Project Guide (step 2, number 6)	Learner included extra flowchart elements like a scenario or user story
<b>Presentation</b>	Learner did not	Learner	Learner spoke	Learner led the

	present their dashboard and flowchart to the class	presented but let others speak about the group project without verbally contributing much to the presentation	about the group project in equal amounts as other group members	group project presentation (facilitated the presentation, introduced other members, and shared successes and challenges of the group project)
<b>Peer Review</b>	Learner did not submit the peer-review checklist for each other group project presented	Learner submitted the peer-review checklist for each other group project presented but did not check for every single item on the list	Learner submitted the peer-review checklist for each group and checked all items on the list for completeness	Learner submitted the peer-review checklist for each group, checked all items on the list for completeness, and wrote suggestions for improvements where needed

# Course Overview

## Class Details

#	Module Name	Lessons and Workshops
VC-01	Visual Dynamics of Data	<b>Lesson 1:</b> Introduction to Visual Communication <b>Lesson 2:</b> Design Principles & Visual Cues <b>Lesson 3:</b> Data Context & Visual Variation
VC-02	Engaging Through Visualization	<b>Lesson 1:</b> Visual Comparisons <b>Lesson 2:</b> Choosing Visualizations <b>Lesson 3:</b> The Infographics Appeal <b>Lesson Async:</b> Visualizing Time-Series Data
VC-03	Dashboard Design	<b>Lesson 1:</b> Introduction to Dashboards <b>Lesson 2:</b> Dashboard Types <b>Lesson 3:</b> Dashboard Details & Aesthetics

VC-04	Dashboards In Use	<b>Lesson 1:</b> Personalized Dashboards <b>Lesson 2:</b> End Users of a Dashboard <b>Lesson 3:</b> Interactive Dashboards
VC-05	Final Project Workshop	<b>Lesson 1:</b> Prepare <b>Lesson 2:</b> Create <b>Lesson 3:</b> Present <b>Lesson Async:</b> Peer Review

## Class Assignments

#	Module Name	To-Dos Before Next Class	Canvas Assignments
DS-01	Visual Dynamics of Data	Lesson 1 Activity: Triangle Top Travel	Submit visual image and updated python script
DS-01	Visual Dynamics of Data	Lesson 2 Activity: Video Game Infographics	Submit your completed questions/answers
DS-01	Visual Dynamics of Data	Lesson 3 Activity: Examining Charts	Submit your completed questions/answers
DS-02	Engaging Through Visualization	Lesson 1 Activity: Pokémon Winner	Submit your dashboard screenshot and Miro link
DS-02	Engaging Through Visualization	Lesson 2 Activity: Petra's Place Visualized	Submit your screenshots
DS-02	Engaging Through Visualization	Lesson 3 Activity: <i>The Golden Blade</i> Infographic	Submit a screenshot of your infographic and your Miro link
DS-02	Engaging Through Visualization	ASYNC Activity: Visualizing Time-Series Data	Submit link of your Tableau Public chart
DS-03	Dashboard Design	Lesson 1 Activity: Wine Reviews Dashboard	Submit a screenshot of your dashboard and Tableau Public link
DS-03	Dashboard Design	Lesson 2 Activity: Wine Reviews Dashboard 2	Submit a screenshot of your dashboard and Tableau Public link
DS-03	Dashboard Design	Lesson 3 Activity: Bad Design	Submit your completed questions/answers, a screenshot of your dashboard, and Tableau Public link
DS-04	Dashboards In	Lesson 1 Activity: The Shinkansen	Submit your completed

	Use	Station	questions/answers, a screenshot of your dashboard, and Tableau Public link
DS-04	Dashboards In Use	Lesson 2 Activity: Business Dashboard	Submit your PDF dashboard and Excel file
DS-04	Dashboards In Use	Lesson 3 Activity: Godzilla Factory Dashboard	Submit your dashboard file made in Excel
DS-05	Final Project Workshop	Lesson 1 Activity: Prepare (Slides 9-10)	No submission yet
DS-05	Final Project Workshop	Lesson 2 Activity: Create (Slide 12)	No submission yet
DS-05	Final Project Workshop	Lesson 3 Activity: Present (Slide 14)	Submit a screenshot of your dashboard and flowchart, then submit your Miro link to these
DS-05	Final Project Workshop	Lesson Async Activity: Final Project Peer Review (Slide 15)	Submit your peer-review checklist for each group
	7.2 Async	The Yeti Fire Brigade	Publish your chart to Tableau Public. Submit URL to Canvas.