



## Agenda:

What is Analytics? What jobs are there?

What do I need to know/have on my resume? How do I get from here to there?

Degrees/Certificates

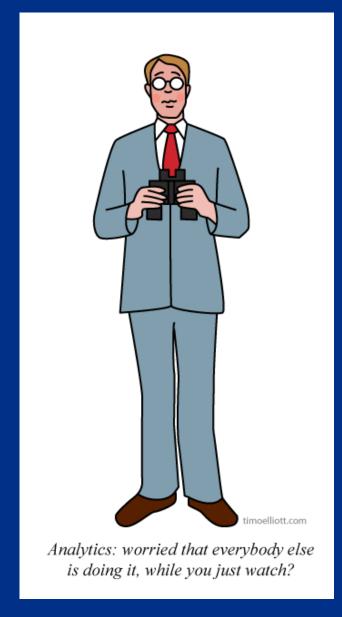
Free Training Paid training Certifications

Resources, Resources!

http://bit.ly/3XRqEN4 ← Slides →

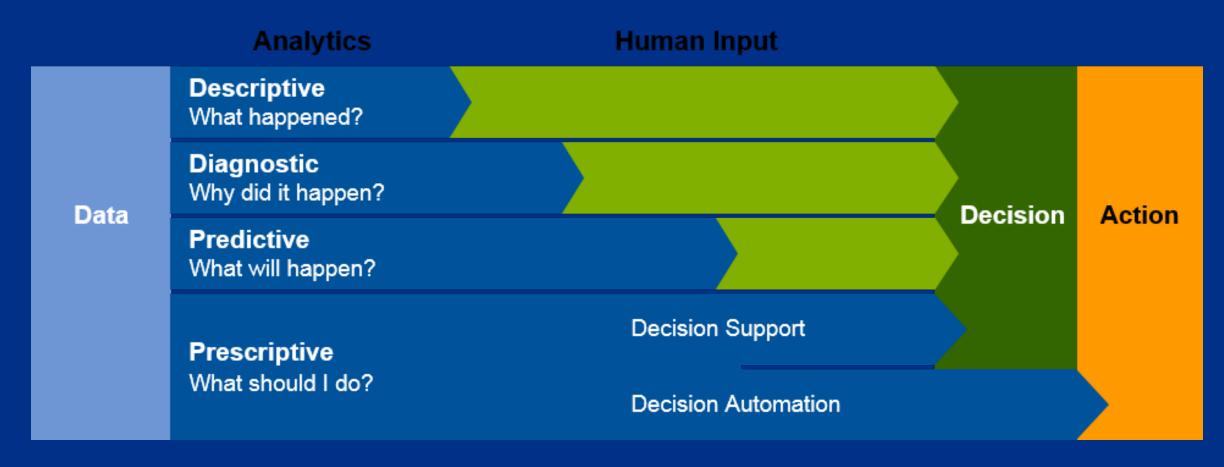






https://timoelliott.com/blog/cartoons/analytics-cartoons

# What is Analytics?



# What is Advanced Analytics?

Advanced Analytics Focuses on More Complex Questions				
Basic Analytics Asks	Advanced Analytics Asks			
How many customers have bought which kind of products in the past three months?	How can we target customers so that we can sell even more products, especially profitable products and those of which we have more inventory?			
How many failures have we experienced in the past three months for different types of equipment?	How can we predict failures before they happen, enabling us to do predictive maintenance instead of routine maintenance?			
What problems with quality have we experienced in the past month?	How can we influence the production process so that we can control quality more effectively?			

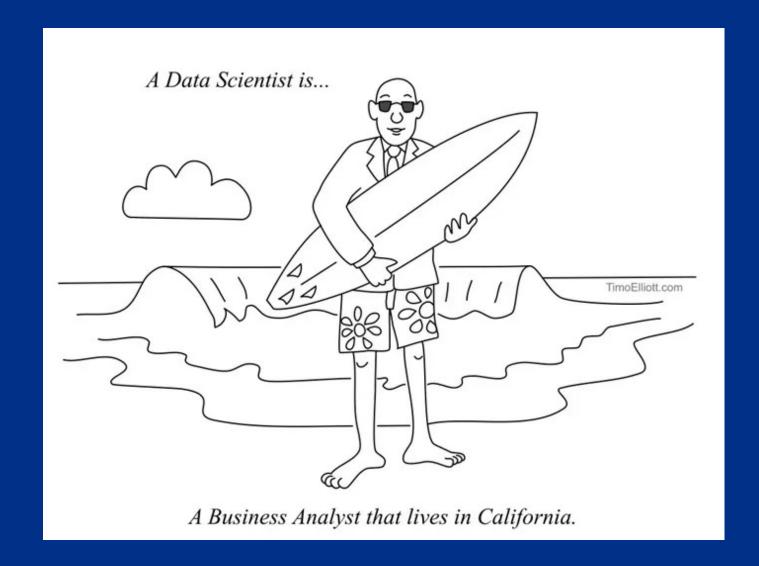


https://timoelliott.com/blog/cartoons/analytics-cartoons

# What is BI vs. Analytics?

## Business intelligence vs. advanced analytics

## What happened?  ## When?  ## Who?  ## How many?  ## Reporting (KPIs, metrics)  ## Automated monitoring and alerting (thresholds)  ## Dashboards  ## Scorecards  ## OLAP (cubes, slice and dice, drilling)  ## Ad hoc query  ## Operational and real-time Bl  ## Why did it happen?  ## Will it happen again?  ## What else does the data tell us that we never thought to ask?  ## What else does the data tell us that we never thought to ask?  ## Statistical or quantitative analysis  ## Data mining  ## Predictive modeling  ## Multivariate testing  ## Big data analytics  ## Text analytics  ## Text analytics		BUSINESS INTELLIGENCE	ADVANCED ANALYTICS
Automated monitoring and alerting (thresholds)  Dashboards  Scorecards  OLAP (cubes, slice and dice, drilling)  Ad hoc query  Automated monitoring and alerting  Data mining  Predictive modeling  Multivariate testing  Big data analytics  Text analytics	Answers the questions:	When? Who?	<ul> <li>Will it happen again?</li> <li>What will happen if we change x?</li> <li>What else does the data tell us that we</li> </ul>
	Includes:	<ul> <li>Automated monitoring and alerting (thresholds)</li> <li>Dashboards</li> <li>Scorecards</li> <li>OLAP (cubes, slice and dice, drilling)</li> <li>Ad hoc query</li> </ul>	Data mining Predictive modeling Multivariate testing Big data analytics



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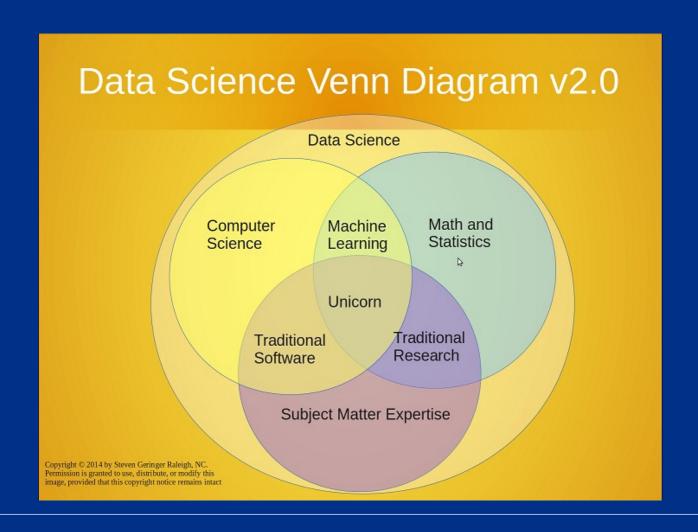
## What is BI vs. Data Science?

## **BI Analyst versus Data Science Characteristics**

Area	BI Analyst	Data Scientist
Focus	Reports, KPIs, trends	Patterns, correlations, models
Process	Static, comparative	Exploratory, experimentation, visual
Data sources	Pre-planned, added slowly	On the fly, as-needed
Transform	Up front, carefully planned	In-database, on-demand, enrichment
Data quality	Single version of truth	"Good enough", probabilities
Data model	Schema on load	Schema on query
Analytics	Retrospective, Descriptive	Predictive, Prescriptive, Preventative

Source: Bill Schmarzo "Big Data MBA" Course Curriculum

# What Do I have to Know/Have on my resume?



# MODERN DATA SCIENTIST

## What Do I

Data Scientist, the sexiest job of the 21th century, requires a mixture of multidisciplinary skills ranging from an intersection of mathematics, statistics, computer science, communication and business. Finding a data scientist is hard. Finding people who understand who a data scientist is, is equally hard. So here is a little cheat sheet on who the modern data scientist really is.

## sume?

### MATH & STATISTICS

- ☆ Machine learning
- Statistical modeling
- Experiment design
- Bayesian inference
- Supervised learning: decision trees. random forests, logistic regression
- ☆ Unsupervised learning: clustering. dimensionality reduction
- Optimization: gradient descent and variants

### **PROGRAMMING** & DATABASE

- ☆ Computer science fundamentals
- ☆ Scripting language e.g. Python
- ☆ Statistical computing packages, e.g., R
- Databases: SOL and NoSOL
- Relational algebra
- ☆ Parallel databases and parallel guery processing
- ☆ MapReduce concepts
- ☆ Hadoop and Hive/Pig
- Custom reducers
- ★ Experience with xaaS like AWS

## DOMAIN KNOWLEDGE & SOFT SKILLS

- Passionate about the business
- Curious about data
- Influence without authority
- Hacker mindset
- Strategic, proactive, creative. innovative and collaborative

## COMMUNICATION & VISUALIZATION

- Able to engage with senior management
- ☆ Story telling skills
- ☆ Translate data-driven insights into decisions and actions
- ☆ Visual art design
- R packages like ggplot or lattice
- ★ Knowledge of any of visualization tools e.g. Flare, D3 is, Tableau



## What D

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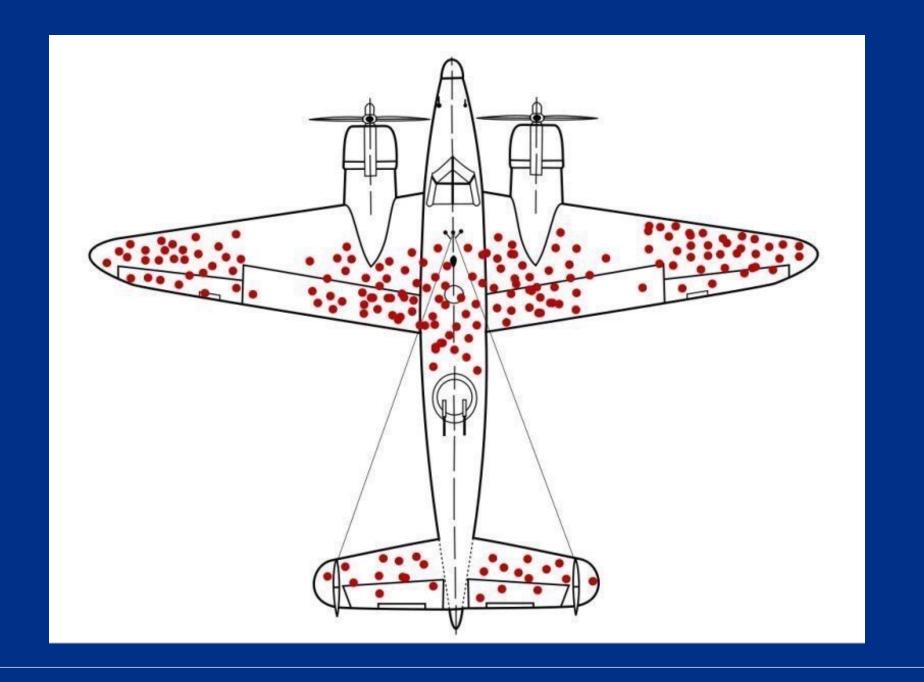


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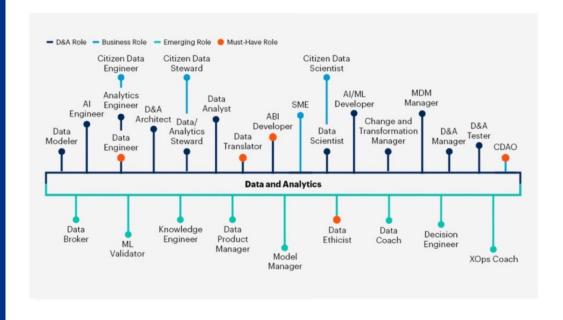
# COMMUNICATION & VISUALIZATION

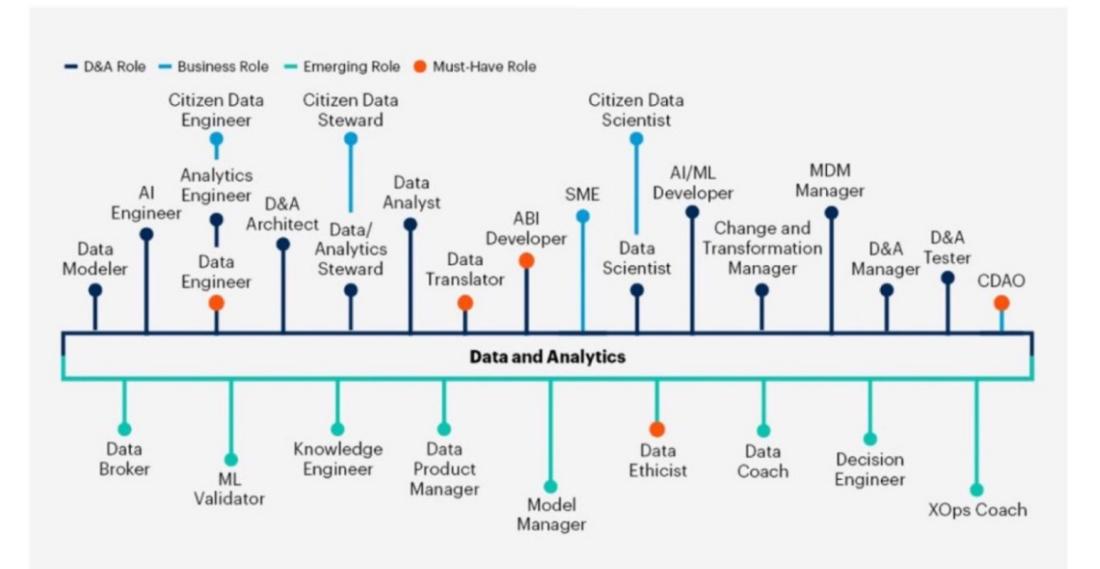
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# What Jobs Are out there in Analytics – Lots!

# The Emerging Spectrum of Data and Analytics Roles





Big Data Engineer	Data Analytics Manager	Hadoop Administrator	Sr. BI Engineer
			Sr. Business Intelligence
Billing Analyst	Data Engineer	Hadoop Engineer	Analyst
Business Analyst	Data Engineering Manager	HRIS Analyst	Systems Administrator
Business Intelligence			
Engineer	Data Governance Manager	Imagery Analyst	Systems Analyst
Business Intelligence			
Manager	Data Integration Specialist	Incident Response Analyst	Targeting Analyst
		Intelligence	
Business Process Analyst	Data Manager	Analyst	Technical Analyst
	Data Quality	Intelligence	
Business Process Manager	Specialist	Specialist	Vice President, Analytics
		IT	Vice President, Client
Business Solutions Analyst	Data Scientist	Analyst	Services
	Data Warehouse/ETL	IT Systems	Vice President, Data
Business Strategy Manager	Developer	Engineer	Science
	Data Warehouse/ETL	Operations	
Business Systems Analyst	Engineer	Manager	Vice President, Information Security
			Vice President, Information
Chief Data Officer (CDO)	Database Administrator	Planning Manager	Technology
		Programmer	
Computer Systems Analyst	Digital Marketing Manager	Analyst	Vice President, Professional Services
Configuration Management Specialist		Research Analyst	Vice President, Research
	Director, Business	Senior Data	
Data & Analytics Consultant	Intelligence	Analyst	Vice President, Technology
Data & Analytics Manager	Director, Data & Analytics	Senior Programmer Analyst	Web Engineer
	Enterprise		
Data Analyst	Architect	Software Engineer	Web Manager
		Software Infrastructure	
Data Analytics Engineer	Functional Analyst	Engineer	Webmaster

# For Other Opinions Some More Readings



How to Become a Data Analyst with No **Experience** 



BY EMILY STEVENS, UPDATED ON DECEMBER 7, 2022

The 9 Best Data Analytics Certification Programs of 2023 (careerfoundry.com)

The Ultimate Guide to Entry-Level Data Analyst Jobs (careerfoundry.com)

Data Analytics Job Descriptions (And What They Really Mean) (careerfoundry.com)

36 Alternative Job Titles for Business Analysts (bridging-the-gap.com)

[ Learn how to use data analytics for decision-making and the secrets of highly successful data analytics teams. | Beware the 12 myths of data analytics and sure-fire ways organizations fail at data analytics. | Get the latest on data analytics by signing up for CIO newsletters. ]

Last year, CIO contributor Mary K. Pratt offered an excellent analysis of why data analytics initiatives still fail, including poor-quality or siloed data, vague rather than targeted business objectives, and clunky one-size-fits-all feature sets. But a number of fresh approaches and technologies are making these

In this bundle of articles from CIO, Computerworld, CSO, InfoWorld, and Network World, you'll find advice and examples that can help ensure your own analytics efforts deliver the goods. These initiatives tend to resemble dev projects - even when commercial products are involved - and feature the same well-defined goals and iterative cycles that distinguish successful software development outcomes.

Business Intelligence & Analytics Job Titles Sitemap - Ladders \$100K Job Search, News & Career Advice (theladders.com)

5 perspectives on modern data analytics | CIO

https://www.kdnuggets.com/2020/09/modern-data-science-skills.html



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- · Receive 5 daily lessons that take around 15 minutes
- . Find out if data analytics is right for you

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understanding of software development, DevOps, and using GitHub, Docker, and similar tools.

We reviewed many blogs and articles on Data Science skills, and updated and expanded the list of skills/knowledge areas from 30 items last year to 50 in this poll. To better organize this list, we divided t into 8 categories, adding 5 more to ones in Conway Venn diagram:

- Programming Languages: Python, R, Java, Java, C++, MATLAB, SAS, Scala, Julia
- Math & Stats: Algebra & Calculus, Probability & Stats, Survival Analysis, Epidemiology
- Business & Communication: Business Understanding, Critical Thinking, Communications Skills, Excel, Data Visualization, Tableau, PowerBl
- Data Science / ML Tools/Methods: Data Cleaning / Prep, ML Algorithms, Scikit-learn, Text Processing, XGBoost, Unstructured Data, Kaggle, Reinforcement Learning
- Software Development: Github, Software Engineering, Docker, DevOps, Kubernetes
- SQL / Databases: SQL/Database Coding, No-SQL Databases, Graph Databases
- Big Data / Cloud: AWS, Apache Spark, Dask, Microsoft Azure, Google Cloud, Hadoop, Other Big Data Tools, Other Cloud Computing Platforms
- Deep Learning: DL algorithms, Keras, NLP, TensorFlow, Computer Vision, PyTorch, Other DL frameworks



## DEGREES BUSINESS VS. TECHNOLOGY

Ask where their alumni are working, ask who is coming to recruit this term, ask what will I be learning, ask who will be teaching me?

Ask yourself what is missing from my resume, how long do I have to fill it in with what I am missing? Do I already have a degree? Do I need a full degree or a certificate?

# Business IS Degree

**Business Classes:** 

Acct, Blaw, Econ, Computer

MGT, Oper Mgt., Strategy, MKTG, Finance, SCM, International, B Comm, Biz Math

IS Classes:

JR - Python, DB, SA&D, Enterprise Systems

SR – BI & Analytics, EPM, Infrastructure/Networking, Project Implementation

# Tech Degree

**Business Classes:** 

Acct

MGT

Strategy

**MKTG** 

Finance

B Comm

IT Classes:

Python, R, Go, Dev/Ops

DB, DW, Data Mining, Architecture, ML, Al

SDLC, Agile, Scrum, Prod Mgr, Proj. MGT, Six Sigma

BI & Analytics, EPM, Data Viz, Data StoryTelling, Predictive Analytics, Pers. Analytics, Opt

Infrastructure/Networking, Cloud, Tools, Open Source

# Certificates at Uni's: Example of What to Look For

### CERTIFICATES IN BUSINESS ANALYTICS

#### Specialized Graduate Certificate (4 courses, 16 credit hours)

The specialized certificate addresses data analytics in all business and enterprise decisions. You'll learn to:

- use basic coding principles of solution design including looping and conditions
- develop data cleaning, data analysis, data mining, and predictive modeling skills for data sets of varying sizes
- understand database design principles and construct appropriate queries from databases
- apply appropriate data modeling techniques and present result using appropriate information display techniques.

You'll take four foundation courses at your own pace:

- STAT 4610 Business Analytics
- INFO 4120 Python
- INFO 4140 Business Databases
- INFO 4300 Predictive Analytics

#### Graduate Certificate (6 courses, 24 credit hours)

In addition to the four foundational courses, the graduate certificate offers electives that let you expand your knowledge in the topics that interest you most.

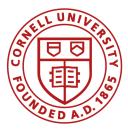
You'll take the foundation courses above, plus choose two of the following electives:

- INFO 4240 Data Warehousing
- INFO 4340 Data Mining and Visualization
- INFO 4390 Analytic Modeling in R
- INFO 4590 Optimization

View course descriptions

https://daniels.du.edu/business-information-analytics/certificates/

# **University Certificates**



Data analytics is among today's fastest-growing and highest-paid professions as organizations increasingly rely on data to drive strategic business decisions. Whether you are gathering data or analyzing it to make recommendations, this certificate is designed to provide functional literacy in critical business analytics.



- + Understanding and Visualizing Data
- + Implementing Scientific Decision Making
- + Using Predictive Data Analysis

# University Certificates

CARL H. LINDN	IER CO	LLEGE OF	BUSINESS			
The Lindner Advantag	ge Aca	ademics Fac	culty & Research	Centers & Partnerships Career Services Alumni & Giving Resources COVID-1	19 Updates	
Operations Excellence > Data analytics certificate core courses						
Public Economics		Course	Course Title	•	Credit	
Real Estate	>	No.			Hours	
Taxation	>	*BANA 6043	Statistical This is a course on the use of computer tools for data Computing management and analysis. The focus is on a few popular dat		2	
Undergraduate Programs	>		6	management and statistical software packages such as SQL,		
The Lindner MBA	>			SAS, SPSS, S Plus, R, and JMP although others may be considered. Data management and manipulation techniques		
Specialized Master's Programs	>			including queries in SQL will be covered. Elementary analyses may include measures of location and spread, correlation,		
Online Programs				detection of outliers, table creation, graphical displays, comparison of groups, as well as specialized analyses.		
PhD Programs	>	BANA			2	
Graduate Programs FAQs		7038	Methods	analysis methods. Various aspects of linear and logistic regression models are introduced, with emphasis on real data	2	
Graduate Information Sessions				applications. Students are required to analyze data using		
Academic Resources	>	IS 6030	Management databases to store, manipulate and query data. The course	2		
Tuition and Aid	>			databases to store, manipulate and query data. The course	2	
More Information / Visit Us			introduces the structured query language (SQL) used to manage data. Students who complete this course should			
Apply to Lindner				understand how to use SQL for basic data manipulation and queries. This course is intended for users of existing		
Dual Graduate Degree Options				databases to extract needed information and should not be taken by MSIS students or those students who wish to learn		
				detailed database design techniques.		
		*IS 7034	Data Warehousing for Business Intelligence		2	

Course No.	Course Title	Course Description	Credit Hours
BANA 6037	Data Visualization	This course provides an introduction as well as hands-on experience in data visualization. It introduces students to design principles for creating meaningful displays of quantitative and qualitative data to facilitate managerial decision-making.	2
BANA 6044	Applications Development Using VBA	The use of visual basic for applications for the development of applications of management science models for planning and decision support in a spreadsheet environment.	2
BANA 7046	Data Mining I	This is a course in statistical data mining with emphasis on hands-on data analysis experience using various statistical methods and major statistical software (SAS and R) to analyze large complex real world data. Topics include: Data Processing. Variable Selection for linear regression and generalized linear regression. Out-of-sample Cross Validation. Generalized Additive models. Nonparametric smoothing methods. Classification and Regression Tree. Neural Network. Monte Carlo Simulation.	2
BANA 7047	Data Mining II	This is a course in statistical data mining II with emphasis on hands-on data analysis experience using various statistical methods and major statistical software (SAS and R) to analyze large complex real world data. Topics include: Missing Data Imputation, Bootstrapping, Boosting and Multiple Additive Regression Trees, Bayesian Trees, Support Vector Machine, Discriminant Analysis, Cluster Analysis, Factor Analysis, Principle Component Analysis.	2
IS 7032	Database Design	This course provides in-depth coverage of the principles of database design. It is a follow on to IS 7030. Having learned to develop relational data models in the first course, students start this course with concepts related to validating and revising the database design using normalization theory. This is followed by relational algebra and structured query language (SQL) for data definition (DDL), data manipulation (DML), data control (DCL), and deeper level of data querying (DQL) for the implementation of the database design. Finally, higher level normalization concepts are introduced. Workshop and laboratory sessions are included to provide hands-on learning experience in normalization procedures and SQL.	2
IS 7036	Data Mining for Business Intelligence	This course is designed for the in-depth learning of datamining knowledge and techniques in the context of business intelligence. The topics include association rules, classification, clustering and text mining. Students will apply and integrate the business intelligence knowledge learned in this course in leading software packages.	2
IS 7038	Managing Business Intelligence Projects	This course discusses key concepts in the management of Business Intelligence Projects. Using the Systems Development Life Cycle as an organizing framework, and a case discussion based pedagogy, students are exposed to the major challenges in justifying BI projects, eliciting user requirements, selecting the right tools and technologies, and implementing the final solution.	2

# University Certificates

### Curriculum

Boston University's Graduate Certificate in Applied Business Analytics consists of four required online courses (16 credits).

Students who earn the Graduate Certificate in Applied Business Analytics may waive MET AD 616, MET AD 654, and MET AD 688 for the Boston University Metropolitan College Master of Science in Applied Business Analytics degree program.

As a **prerequisite** to the course MET AD 571 Business Analytics Foundations, applicants are required to complete MET AD 100 Pre-Analytics Laboratory and MET ADR 100 Introduction to R for Business. MET AD 571 is a prerequisite for MET AD 616, MET AD 654, MET AD 688, and MET AD 699. Some courses may have additional prerequisites.

#### Courses

(Four courses/16 credits)

▶ METAD571 Business Analytics Foundations

Plus three chosen from the following:

- ▶ METAD616 Enterprise Risk Analytics
- ► METAD654 Marketing Analytics
- ▶ METAD688 Web Analytics for Business
- ▶ METAD699 Data Mining for Business Analytics

# Louisiana Tech University Certificates



## MS in Analytics Georgia Tech

## **Online Master of Science in Analytics - Curriculum**

Fall 2023 Standard Application Deadline is Feb. 1









**FALL 2023 STANDARD** APPLICATION DEADLINE

Feb 1, 2023

**FALL 2023 FINAL** APPLICATION DEADLINE Mar 15, 2023

SPRING PROGRAM BEGINS

Jan 9, 2023

NEXT INFO SESSION

Jan 26, 2023

Request Information >>

Attend Info Session >>

RSVP for the Jan 24 Application 101 Webinar

On-Campus Program >>

How to Apply

### Curriculum

There's no better way to learn about a field that requires computing, business, statistics, and research, than through a university that ranks in the top 10 in all four categories. The Online Master of Science in Analytics (OMS Analytics) at Georgia Tech meets this criterion - and many other high standards.

Many students fulfill the degree requirements in one-and-a-half to two years; however, the program is flexible enough that you have up to six years to complete them.

The program also consists of 30 course offerings. All OMS Analytics students take 15 hours of mandatory (core) coursework on big data analytics in business, visual analytics computing, statistics, and operations research essentials. Additionally, you get to focus on your individual interests through 15 hours of electives in a specialized track (area of

#### Six-Hour Practicum

The degree program culminates with a practicum course that enables you to apply previously learned concepts and classroom teachings to a project of significant interest to you. Like students in the on-campus version of the program, you can propose an authentic business need that uses data from your own employer, or you can gain realworld experience through one of our pre-selected projects.

#### Visual Snapshot

Our OMS Analytics curriculum grid breaks down the different types of courses and concentrations into digestible components. For more details about each track's focus, scroll down to the section below.

#### Areas of Specialization

Every student in the degree program gets to declare an area of specialization within data science and analytics. Three focus areas are available: an Analytical Tools track, a Business Analytics track, and a Computational Data Analytics track. The summaries below describe each in more detail.

### **Analytical Tools Track**

The Analytical Tools track focuses on the quanti methodology, regression, forecasting, data minir

#### INTRODUCTORY CORE REQUIREMENTS (9 I

#### SPECIAL NOTE

Students with sufficient background in any o

#### Introduction for Computing for Data Analytic

Computational techniques needed for data a basic numerical computing, and visualization both CSE 6040 and CX 4240.

#### Introduction to Analytics Modeling (ISYE 65)

This course gives a basic introduction to a w behind the models, experience using softwar to find a complete solution. Modeling approaseries modeling, regression models, design c simulation, PCA, and optimization. Cross-cut are also covered.

#### Business Fundamentals for Analytics (MGT)

An accelerated introduction to the basics of I framework that will enhance a person's effec

#### ADVANCED CORE REQUIREMENTS (6 HOUR

#### Data and Visual Analytics (CSE 6242)

The course introduces students to analysis a applications will be covered including severa

#### Data Analytics in Business (MGT 6203)

Teaches the scientific process of transformir methodologies, algorithms, and challenges re before starting the practicum. Suggested pre

STATISTICS ELECTIVES (6 HOURS)

OPERATIONS ELECTIVE (3 HOURS)

TRACK ELECTIVES (6 HOURS)

ADDITIONAL ELECTIVES (0-9 HOURS)

This course covers the fundamentals of E Bayesian computation, and how they are Bayesian inference, credible sets, conjugempirical Bayes models, and hierarchical MCMC, Metropolis-Hasting algorithms, G approximation. Various applications of B Statistics Course

#### Computational Data Analysis (ISYE 6740

Machine learning is a field of computer s programmed. The course is designed to a most important methods to know about. one' using asymptotic theory? How can w dataset of interest? What can we say abo function? What does it mean to be statist grounding in the methods, theory, mather learning. The course covers topics from r class with a pre-existing working knowled advantage, but the class has been design participate. Some experience with coding

#### Regression Analysis (ISYE 6414)

This course covers the fundamentals of I Bayesian computation, and how they are Bayesian inference, credible sets, conjugempirical Bayes models, and hierarchical MCMC, Metropolis-Hasting algorithms, G approximation. Various applications of B Statistics Course

#### Time Series Analysis (ISYE 6402)

Basic forecasting and methods, ARIMA n

#### Data Mining and Statistical Learning (IS)

An introduction to some commonly used (KNN) algorithm, linear methods for regre vector machine, neural networks, and Km methodology, motivation, and assumption data examples using the R statistical sof

#### High-dimensional Data Analytics (ISYE 8

This course focuses on analysis of high-c functional data using statistical machine processing, multilinear algebra and tenso applications including low rank and spars modeling and machine learning and their

#### Data Analysis for Continuous Improvement (MGT 8823)

Because it is one thing to know how to analyze data and another thing to actually use it to solve problems, the purpose of this course is to show how mastery of data analysis can be applied to the real world. In doing so, we will explore the development of key performance indicators (KPIs) and how to use KPIs to drive improvement in an organization. We will also discuss the four methods of continuous improvement and how data analysis can be leveraged in each method. Because the course weaves examples from both industry and everyday life, what is learned can be directly applied to both your personal and professional lives. In addition to the practical knowledge gained, students will also be shown tools that are outside of the typical analytics course and provided with the knowledge of how to use these tools on their own and in conjunction with the data analysis. Because one must know not only how to analyze data but also how to determine from where the actual data should come, the tools chosen will assist the student in coming up with what to analyze in the first place.

#### Digital Marketing (MGT 6311)

Become familiar with the key concepts and techniques utilized in modern digital marketing. Understand the primary characteristics of various online channels including mobile marketing, email marketing, and social media marketing. Gain awareness of important concepts and best practices in the use of digital marketing tools (search engine optimization, pay-per-click advertising, etc.).

#### Financial Modeling (MGT 8813)

Students will create spreadsheets using pivot tables, Excel functions, solver, goal seek, and VBA. The course will also include topics such as time value of money, stock and bond valuation, firm valuation, financial statements, cost of capital, option pricing models, and portfolio optimization. This course is intended to prepare students to build financial

#### Privacy for Professionals (MGT 6727)

This course takes a multi-disciplinary approach to the study of privacy -- a current topic of great international interest for those in technology, policy, law, and/or business. It prepares students to work professionally in the privacy field, with an emphasis on U.S.-based law and practice. Course topics include introduction to privacy, federal and state regulators and enforcement of privacy law, principles of information management, online privacy, the California Consumer Privacy Act, information security and data breach notification laws, European Union privacy laws, medical privacy, financial privacy, education privacy, workplace privacy, privacy issues in civil litigation and government investigations, and emerging issues. The professor draws on his extensive experience in business, government, technology, and law to address current privacy debates.

#### Information Security Policies and Strategies (PUBP 6725)

This course introduces students to the policy and management aspects of cybersecurity. It is based on the idea that cybersecurity policy can be sorted into three "layers" representing different levels of social organization: individual organization, the national level, and the transnational level. The course is divided into four modules: the first exposes students to basic concepts and definitions regarding policy, governance, and threats; the second deals with cybersecurity policy at the organizational level; the third deals with cybersecurity public policy at the national level; the fourth deals with cyber conflict, policy, and diplomacy at the transnational level. This course situates cybersecurity in the overall Internet ecosystem.



## DEGREES BUSINESS VS. TECHNOLOGY

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# I'm the senior director of a \$5 billion data company — here's how a mix of programming and leadership courses skyrocketed my career since college

By Julia Pugachevsky Jan 8, 2023, 11:06 AM





Mike Crabtree

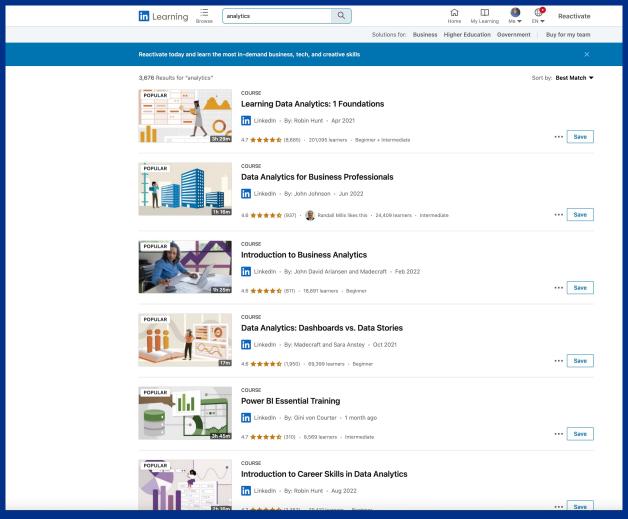
When you buy through our links, Insider may earn an affiliate commission. Learn more.

- I'm the senior director of a \$5 billion data company; before that, I was a manager at Ford.
- I took 25 online courses and earned certificates from <u>Coursera</u>, edX, and <u>LinkedIn Learning</u>.
- Focusing on hard skills like data analysis as well as management helped me move up in my career.

Top editors give you the stories you want — delivered right to your inbox each weekday.

Non-University Certificates, Cetifications &

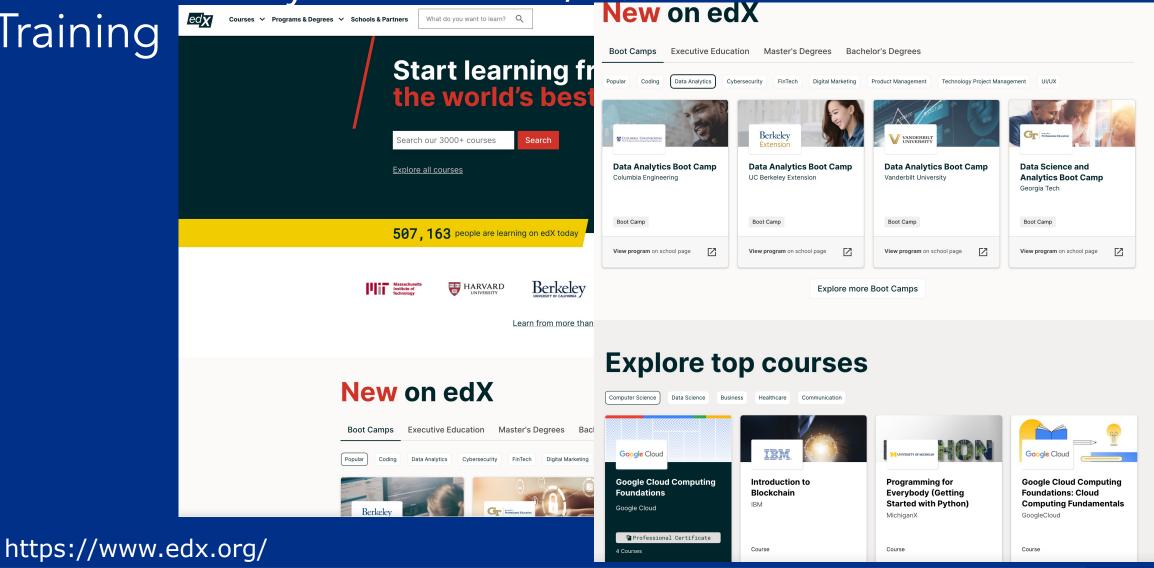
Training



https://www.linkedin.com/learning/search?keywords=analytics

Non-University Certificates, Cetifications &

Training



## Paid Courses





Skills you'll gain: Data Analysis, Data Management, Data Science, Big Data, Database.

★ 4.8 (10k reviews) Beginner · Course · 1-3 Months IBM IBM Skills Netw

**IBM Data Scien** Skills you'll gain: Py Science, Data Analysi

4.6 (105.7k reviev ♀ Credit Eligible Beginner · Profession

University of California, Davis

### Data Visualization with Tableau

Skills you'll gain: Data Visualization, Business Analysis, Data Visualization Software, Data.

4.5 (7.2k reviews) Beginner · Specialization · 3-6 Months **G** Google

### Analitik Data Google

Skills you'll gain: Data Analysis, Business Analysis, Data Management, Statistical...

4.9 (1.2k reviews) Beginner · Professional Certificate · 3-6 Months Google

### Foundations: Data, Data, Everywhere

Skills you'll gain: Data Analysis, Data Management, SQL, Business Analysis, Data...

4.8 (72.6k reviews) Beginner · Course · 1-3 Months

Macquarie University

literacies

★ 4.6 (989 reviews)

Beginner · Specialization · 3-6 Months

Google

### Aspectos básicos: Datos, datos, en todas partes

Skills you'll gain: Business Analysis, Data Analysis, Leadership and Management, Process...

4.8 (2.5k reviews)

Beginner · Course · 1-3 Months



IBM IBM Skills Network

### IBM Data Analytics with Excel and

Skills you'll gain: Data Analysis, R Programming, Data Visualization, Plot (Graphics), Data.

\* 4.7 (14.6k reviews) ☐ Credit Eligible Beginner · Professional Certificate · 3-6 Months



Google Cloud Analyzing and **Google Way** 

Skills you'll gain: Da

Beginner · Course · 1·



University of California, Davis

### Fundamentals of Visualization with Tableau

Skills you'll gain: Data Visualization, Data Visualization Software, Interactive Data..

★ 4.5 (5.9k reviews) Beginner · Course · 1-4 Weeks



Google

### Fundamentos: dados, dados, em todos os lugares

Skills you'll gain: Business Analysis, Data Analysis, Process Analysis, Spreadsheet Softwar.

4.9 (970 reviews) Beginner · Course · 1-3 Months



Macquarie University

#### Analysing: Numeric and digital Finance, Analysis & Modeling MasterTrack® Certificate

Skills you'll gain: Business Analysis, Accounting, Skills you'll gain: Marketing, Accounting, Business Analysis, Customer Analysis, Custome.. Data Analysis, Financial Analysis, Data...

> ♀ Credit Eligible Mastertrack · 6-12 Months



Duke University

### Excel to MySQL: Analytic **Techniques for Business**

Skills you'll gain: Data Analysis, Business Analysis, Probability & Statistics, Spreadsheet...

# 4.6 (14.9k reviews) Beginner · Specialization · 3-6 Months



Renn University of Pe

Data Analysis l Skills you'll gain: Co Python Programming

\* 4.6 (289 reviews)

Beginner · Course · 1-

Visualize **Fiancial** Data in **Tableau** 

Coursera Project Network

### Visualize Financial Data In Tablea

Skills you'll gain: Data Visualization, Tableau Software, Finance, Financial Analysis, Statistical

Intermediate · Guided Project · Less Than 2 Hour Degree · 14 - 32 months



Macquarie University

### Global Master of Business Administration (MBA)

Skills you'll gain: Leadership and Management. Entrepreneurship, Marketing, Strategy and...

€ Earn a degree ♀ Credit Eligible



University of Illinois at Urbana-Champaign

### Master of Science in Management

Skills you'll gain: Accounting, Leadership and Management, Entrepreneurship, Marketing,...

Sarn a degree ♀ Credit Eligible Degree · 1 year



University of Illinois at Urbana-Champaign

### Master of Science in Accounting

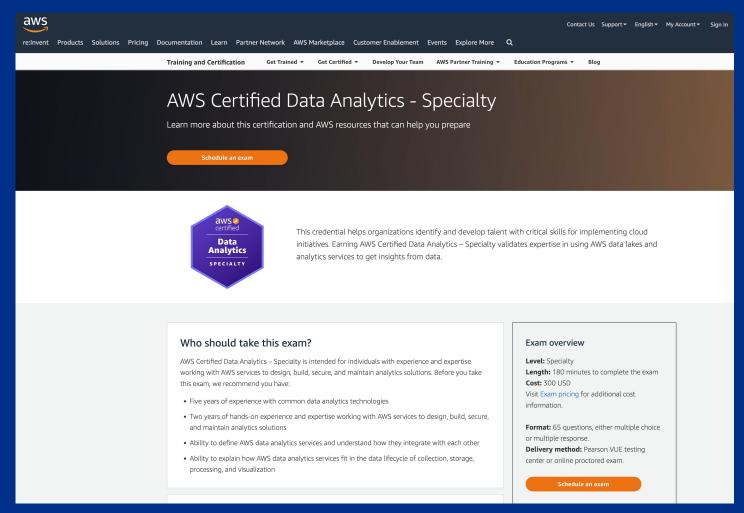
Skills you'll gain: Accounting, Leadership and Management, Entrepreneurship, Marketing,...

Sarn a degree ☐ Credit Eligible

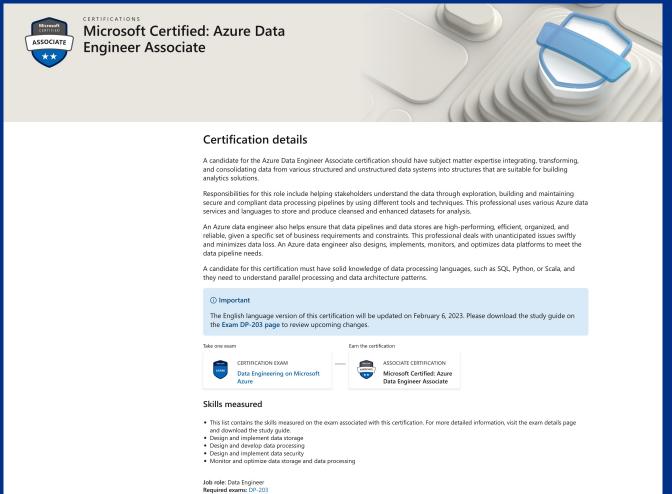
Degree · 1.5 – 3 years

https://www.coursera.org/search?query=data%20analytics&

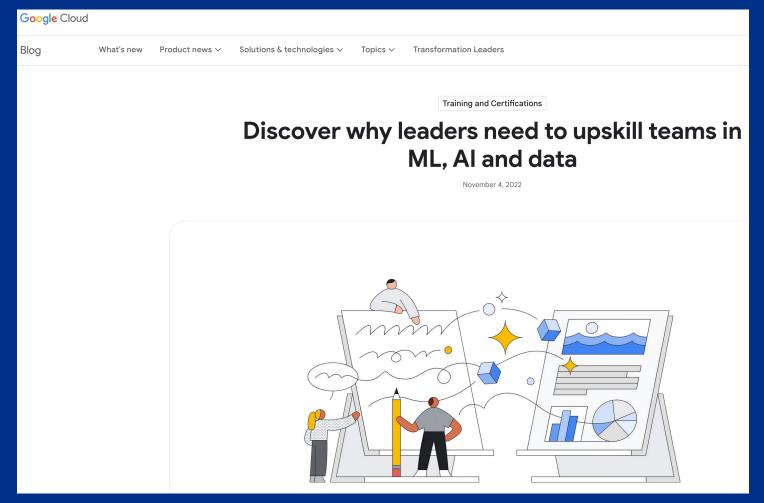
Non-University Certificates, Cetifications & Training aws



https://aws.amazon.com/certification/certified-data-analytics-specialty/



https://learn.microsoft.com/en-us/certifications/azure-data-engineer/?WT.mc\_id=DP-MVP-5004032



https://cloud.google.com/blog/topics/training-certifications/how-to-upskill-ai-ml-and-data-teams-for-business-impact

### New yea



### Start b

Your experiend about transfer today:

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- You don't hat a recent vide
- Your compa your colleag

### **Define**

If you are look about the clouto start<sup>1</sup>:

- Code is nor
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   experience.
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- Understand fundamenta
- Learn core and subnets
- Make sure y
   for a role at
- Familiarity are portable

#### No-cost course

 <u>Cloud Digital Leader Learning Path</u> - understand cloud capabilities, products and services and how they benefit organizations

### \$99 registration fee

• Google Cloud Digital Leader Certification - validate your cloud expertise by earning a certification

### Commit to learning in the New Year

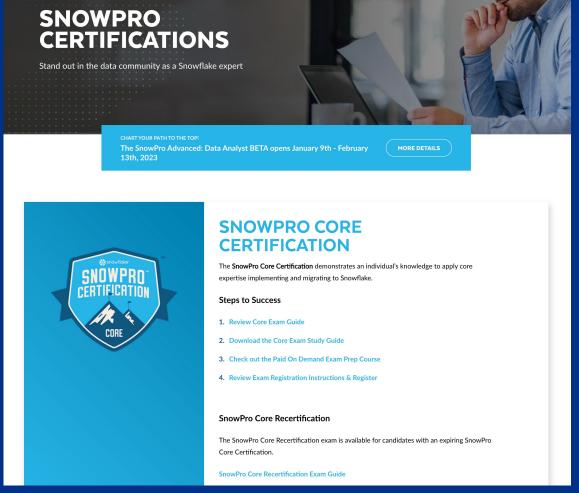
A couple of other resources we have are the <u>Google Cloud Innovators Program</u>, which will help you grow on Google Cloud and connect you with other community members. There is no-cost to join, and it will give you access build your skills and the future of cloud! Join today.

Start your new year strong, whether you are exploring Google Cloud Data, DevOps or Networking certifications by completing <u>Arcade games</u> each week. This January play to win in <u>The Arcade</u> while you learn new skills and earn prizes on Google Cloud Skills Boost. Each week we will feature a new game to help you show and grow your cloud skills, while sampling certification-based learning paths.

Make 2023 the year to build your cloud career and commit to learning all year, with our \$299/year annual subscription. This subscription includes \$500 of Google Cloud credits (and a bonus \$500 of Google Cloud credits after you successfully certify), a \$200 certification voucher, \$299 annual subscription to Google Cloud Skills Boost with access to the entire training catalog, live-learning events and quarterly technical briefings with executives.

<sup>1.</sup> Starting your career in cloud from IT - Forrest Brazeal, Head of Content Marketing, Google Cloud

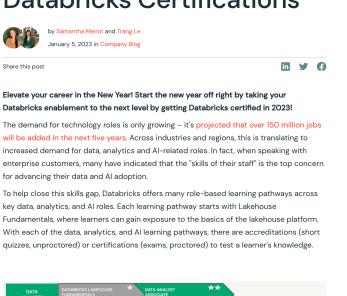
<sup>2.</sup> Credit card required to activate a 30 day no-cost trial for new users.



https://www.snowflake.com/certifications/

# Paid Courses

# Achieve Your Goals With Databricks Certifications





Databricks' Role-Based Learning Pathways

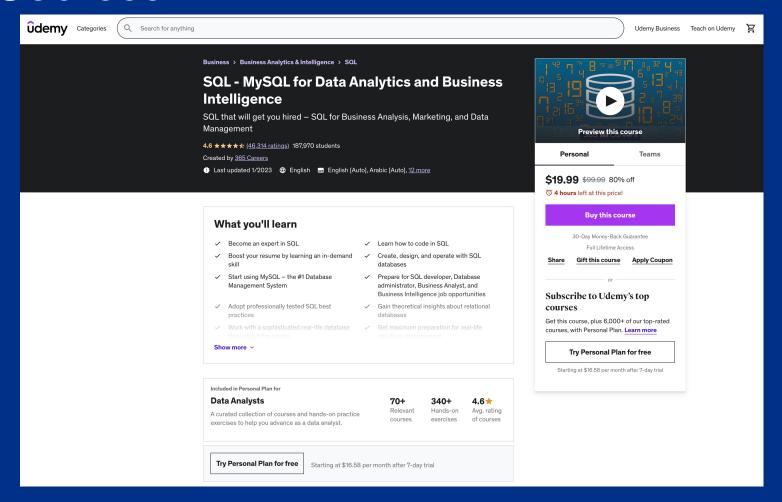






https://www.databricks.com/blog/2023/01/05/achieve-your-goals-databricks-certifications.html

# Paid Courses

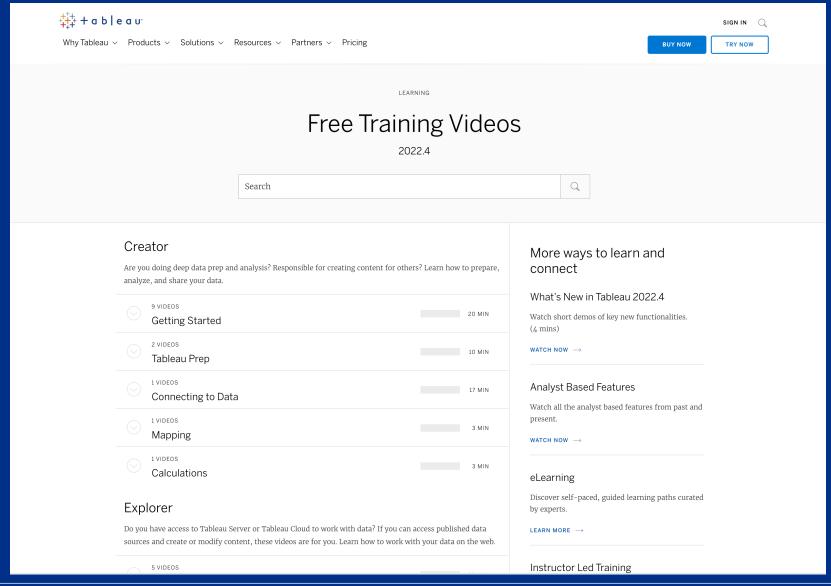


https://www.udemy.com/course/sql-mysql-for-data-analytics-and-business-intelligence/

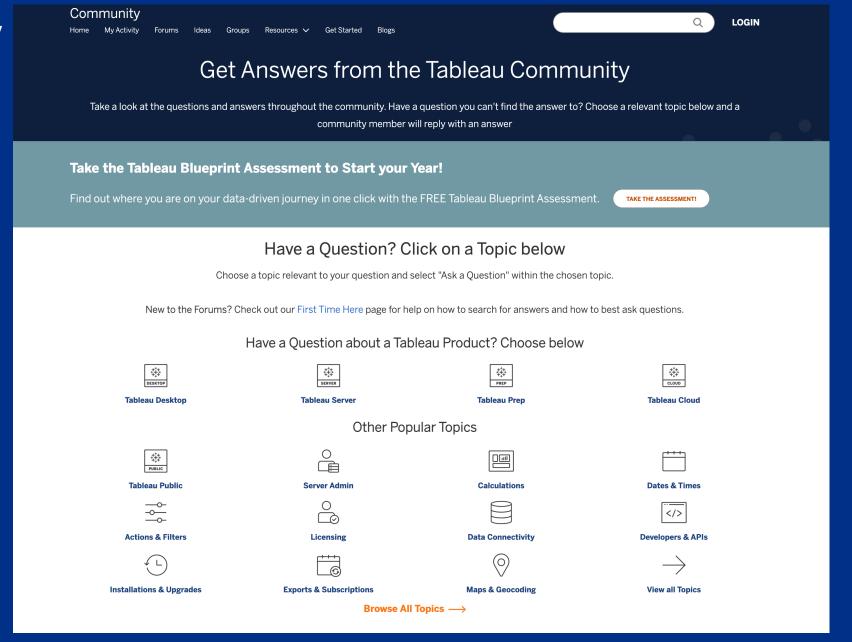
# Free 'Courses'



# Free 'Courses'



# Free 'Courses'



# 'Free' 'Courses'

# Instructor-Led Training is now on Trailhead Academy

Registration and purchasing for instructor led training, including the Tableau Training Pass, is now in Trailhead Academy. Check out the brand new My Learning Dashboard, Profile and more!

IND A CLASS

ACCESS MY TRAININGS



## **Browse Tableau Classes**

INCLUDED IN TABLEAU TRAINING PASS

## Desktop I: Fundamentals

Start here to learn core Tableau skills and get a comprehensive introduction to data analysis and visual design.

FIND A CLASS ->

INCLUDED IN TABLEAU TRAINING PASS

## Desktop II: Intermediate

Expand your Tableau proficiency and differentiate yourself as a power user.

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### Desktop III: Advanced

Make your Tableau charts and dashboards more innovative and able to support complex data analysis.

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### Prep I

Learn to use Tableau Prep Builder to prepare your data for analysis.

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INCLUDED IN TABLEAU TRAINING PASS

### Visual Analytics

Discover the science behind the art of visualizing data in this example-rich course.

FIND A CLASS  $\,\,
ightarrow$ 

## Desktop I & II Accelerated

Ramp up on Tableau Desktop with this fastpaced, three-day course that includes curated content from Desktop I & II.

FIND A CLASS  $\,\,\,\,\,\,\,\,\,\,\,\,\,\,$ 

### Server Administration

Learn best practices around Tableau Server installation and configuration in this foundational course geared towards Tableau

### Server Architecture

Master the skills you need to design a successful Tableau Server deployment in this advanced course.

### Site Administration

Learn how to successfully manage, monitor, and maintain a Tableau site.

FIND A CLASS —

# 'Free' 'Courses'



FEATURED LEARNING PATH

# **Analyst Learning Path**

The Analyst learning path starts your Tableau Desktop journey with the basics and guides you through the topics you need to round out your analyst skill set. Each module ends in an assessment to validate your learning. Pass the assessments and earn up to 5 skill badges.

LEARN MORE  $\rightarrow$ 

# Choose the right eLearning license for you

		RECOMMENDED	
		CREATOR	EXPLORER
PREPARATORY	Data Literacy for All	$\odot$	$\odot$
COURSES	Get Started with Tableau	$\odot$	$\odot$
LEARNING PATHS	Author, Community Leader, Executive Sponsor	$\odot$	$\odot$
	Analyst, Consumer, Data Scientist, Data Steward, Designer, Developer, Server Administrator, Server Architect, Site Administrator	$\odot$	
COURSES	Tableau Fundamentals	$\odot$	
	Tableau Intermediate	$\odot$	
	Tableau Advanced	$\odot$	
	Prep Builder	$\odot$	
		BUY NOW	BUY NOW



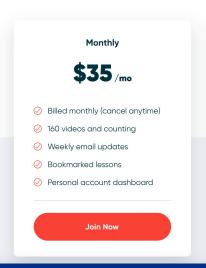
# Premier Visual Analytics eLearning

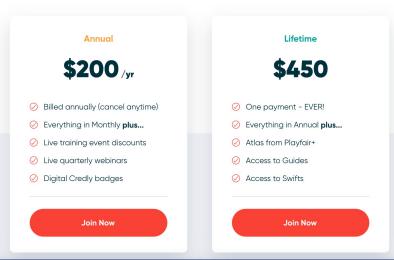
Playfair+ is a premier resource for learning Tableau, data visualization, data analytics, and analytics strategy.

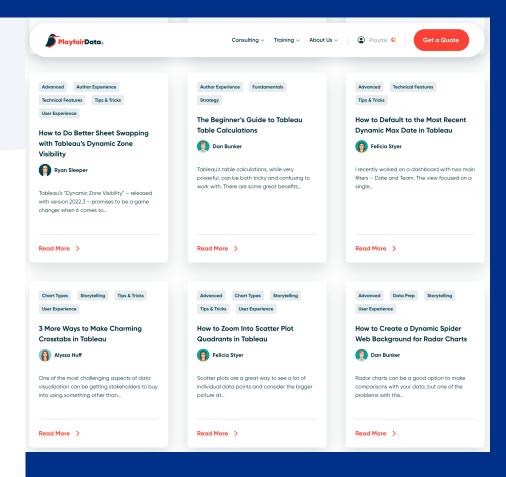
We offer Monthly, Annual, and Lifetime memberships that provide unlimited access to our entire video library, the ability to bookmark lessons, related tutorial content, and more. On top of that, new content is added every month.



## **Our Pricing**







### 48 results for "data"



Data Visualization and Information Design: Create a Visual Model



Information Design: Storytelling with Data in Illustrator

A course by Valentina



Effective Data Visualization: Transform Information into Art



Creative Data Visualization for Narrative Designs



Data Visualization: Design Infographics in Illustrator



**Analog Data** Visualization for Storytelling

Log in



Data Visualization for **Editorial Projects** 



Google Analytics: Introduction to Data



**Creative Data** Visualization for **Beginners** 



Introduction to Data Visualization

A course by Victor



Photography for Image Databases



Data Visualization with Alternative Mediums



Infographic Design: Combine Art and Data



Animated Infographics with Illustrator and After **Effects** 



Creative Infographics: Between Art and Journalism



Life and Detail



Realistic Oil Portraiture: Conveying Detail and Expression



Watercolor with Filigree and Metallic Details



Metal Jewelry with **Embroidered Details** 



Illustration with **Procreate: Create Detailed Compositions** 



Concept Art: Character Design & Worldbuilding



Creative Writing for Beginners: Bringing Your Story to Life



**Digital Illustration:** Create Manga Characters



**Productivity for** Creatives: Planning for Efficiency



Data Visualization and Information Design: Create a Visual Model

A course by Federica Fragapane, Information Designer

Information Content Community

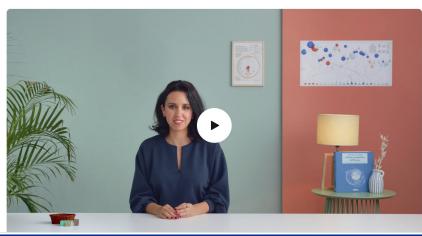
## This is where the adventure begins!

You can start by watching the first video, or not. What's important is making the most out of each unit. Complete the practice exercises, participate in the forum, and when you think you understand everything, mark this unit as completed (clicking on the button at the bottom of the page).

## Introduction

Hello! Welcome to my course! In this unit, I will introduce myself and I will tell you how I got into the data visualization field. I will also share with you the influences that had an impact in my approach to design

About Me - @ 3 minutes, 28 seconds



COURSE SUMMARY

UNITS



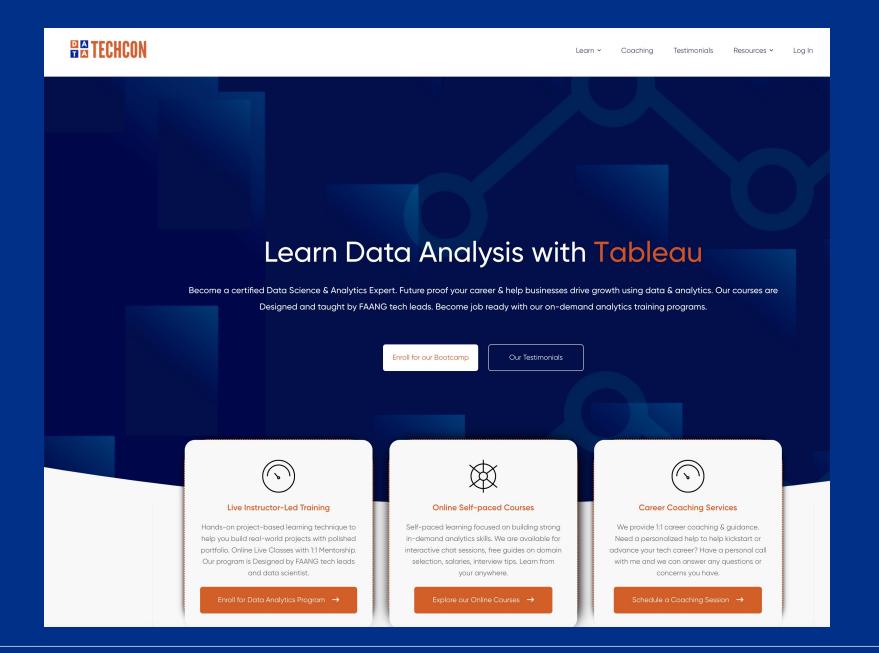








ADDITIONAL RESOURCES





Caminaa

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z Resi

s Abou

data ceach

# Empowering your teams to build successful data solutions themselves

**REQUEST INFORMATION** 

Data Coach works directly with your teams to drive analytics-centric change. We provide leadership support through backlog curation, then focus on curated learning experiences and 1-1 coaching with your teams. This ensures sustainable adoption of your data platform and tools-and drive organizational change through analytics.

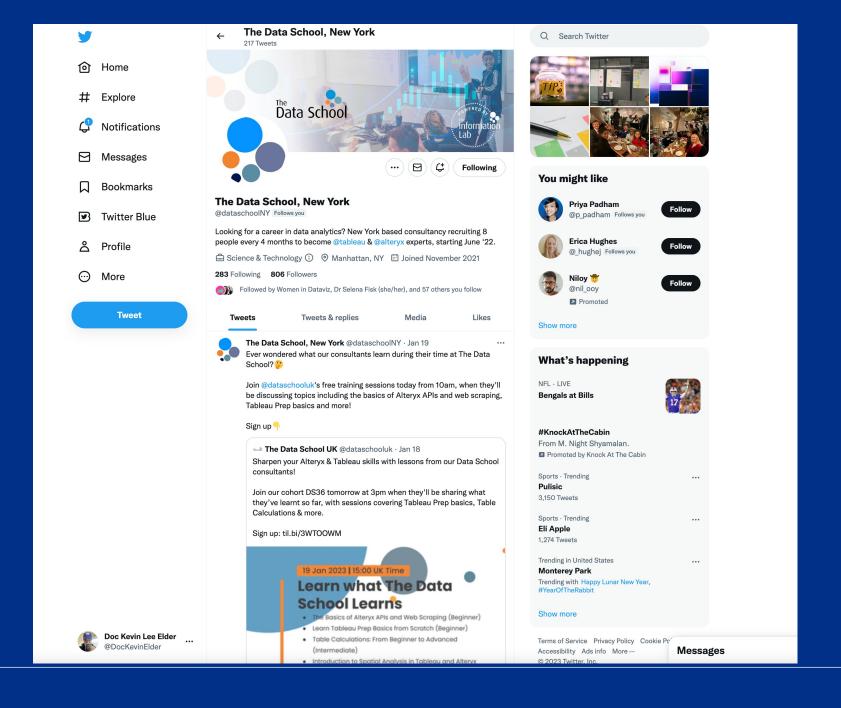
**This is not eLearning**. Traditional eLearning programs have completion rates of ~5% and don't work without a support program.

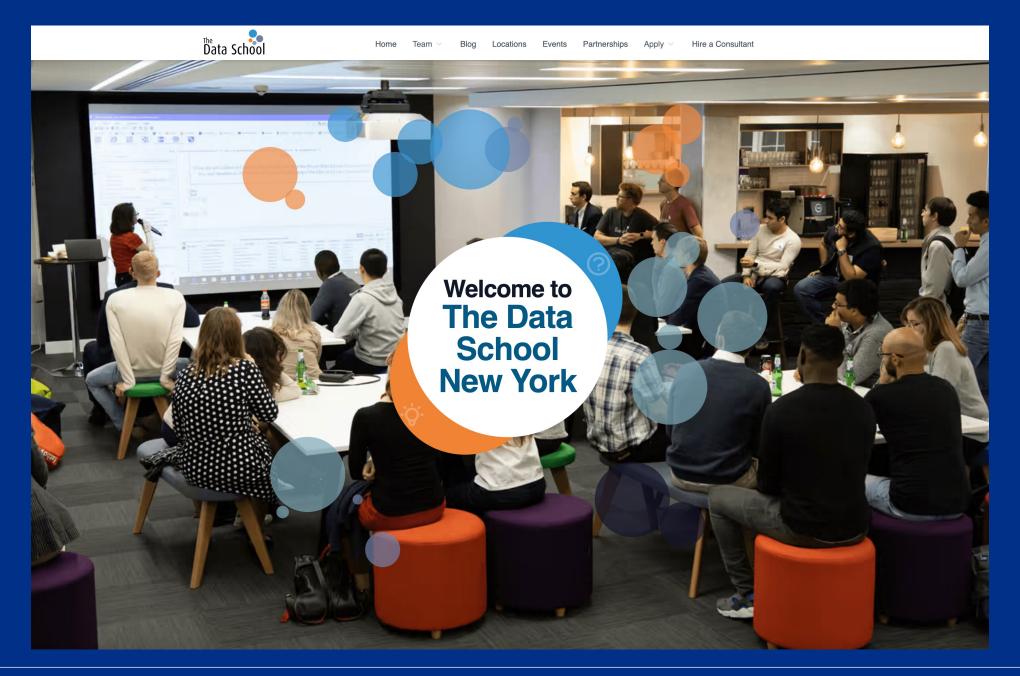
**This is not a bootcamp**. Bootcamps have high completion rates but are very expensive and have low retention and transfer of skills.

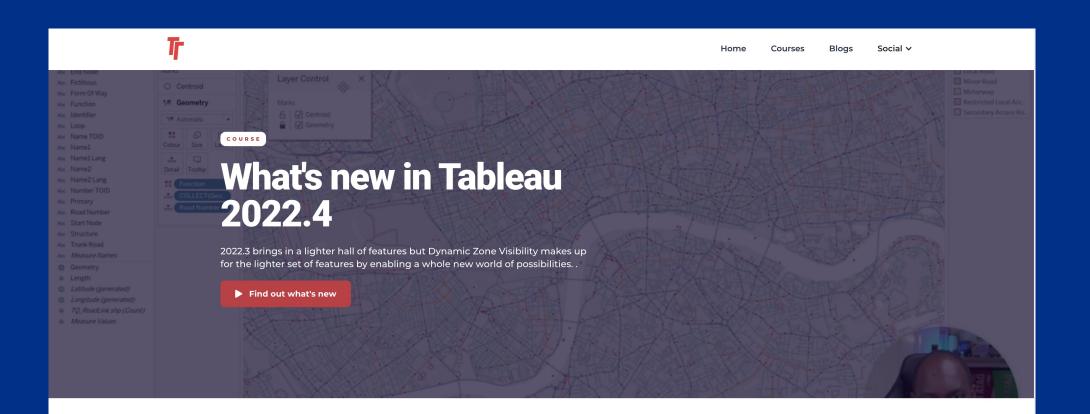
**This is value added**. Data Coach combines the flexibility of self-paced learning with the guidance and support of our experienced coaches, who keep learners engaged and drive the completion of courses to 80%+.

Data Coach provides the foundation for an organization to manage change effectively. We drive your team to use data to inform decision-making. Which can help your organization to be more responsive to change and adapt more quickly to new circumstances.





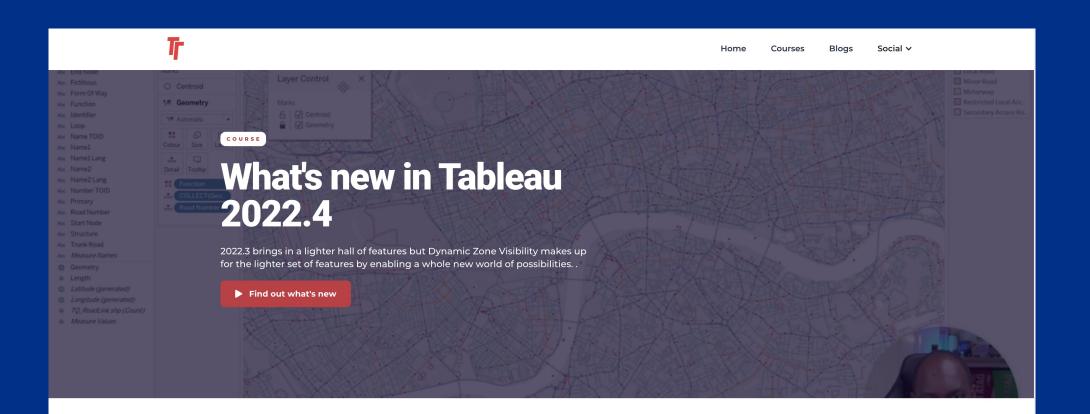




















RECENT POSTS



KEN FLERLAGE - 7 DAYS AGO

I'll admit that I'm terrible with regular expressions (REGEX). That's why I asked Don Wise to write a series of guest blog posts on the bas...

### **KEVIN & KEN FLERLAGE**



Twin Brothers/Tableau Fanatics

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#### **QUICK LINKS**

Essential Reading Swag Shop









# Kevin Flerlage

Manager, Business Intelligence at Unifund and Recovery Decision Science | Cincinnati, Ohio, United States

3X Tableau Visionary (formerly known as Zen Master) | 3X Tableau Public Ambassador | Flerlage Twins.com | Co-Leader of Cincy TUG | Manager, Business Intelligence at Unifund | God Loving | Views are My Own

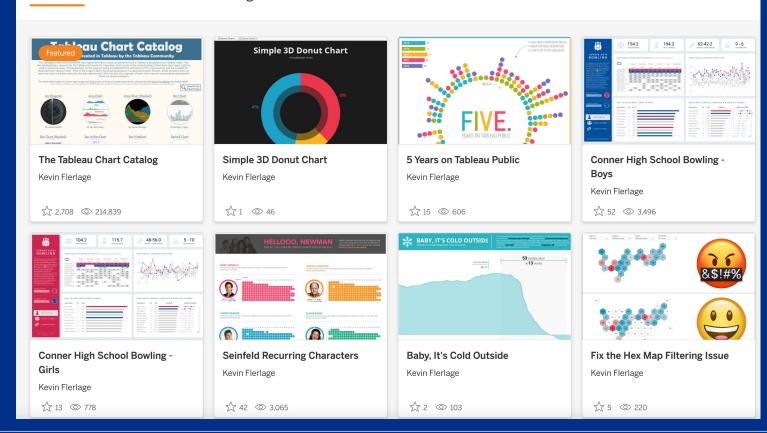
Follow

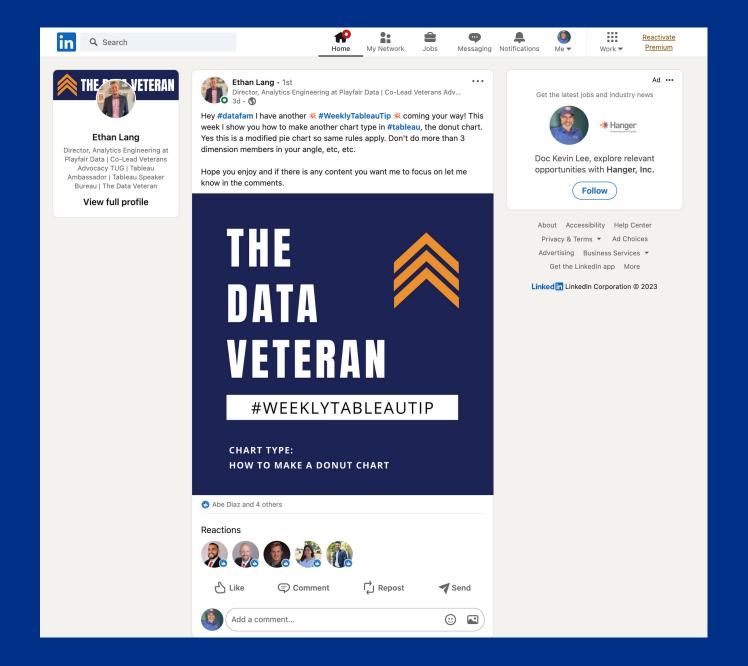
Vizzes 164

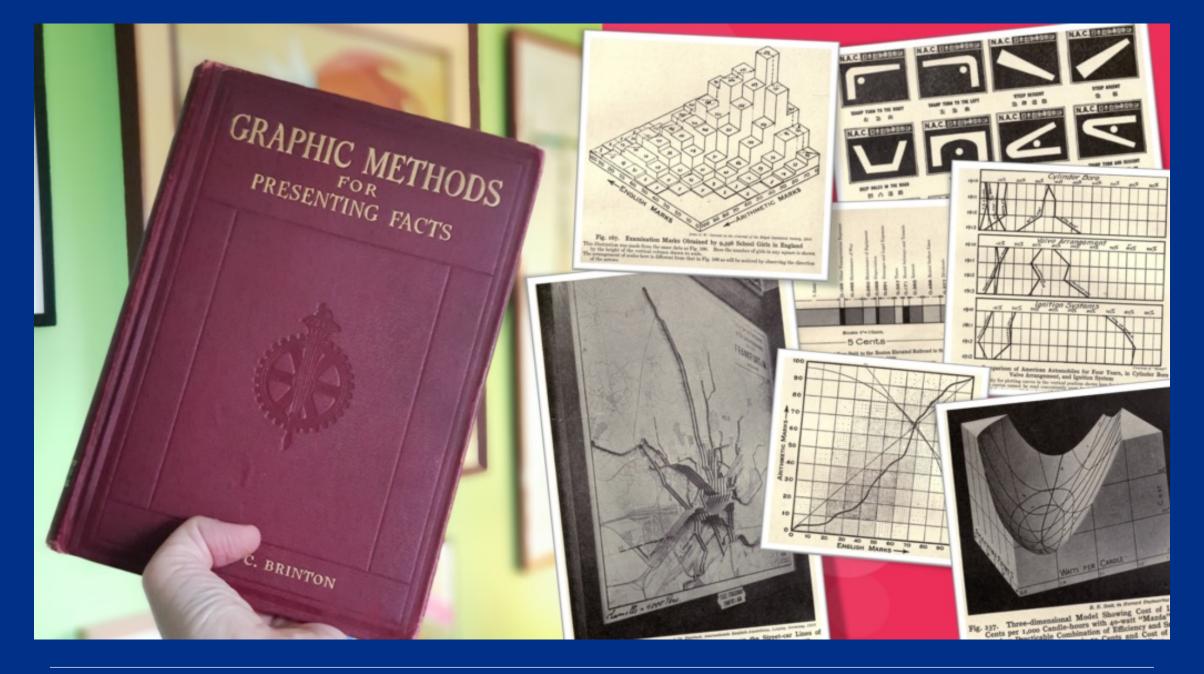
Favorites 2,295

Following 1,862

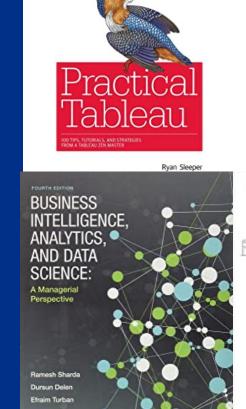
Followers 6,922





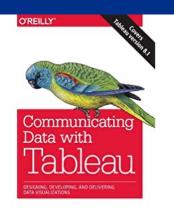


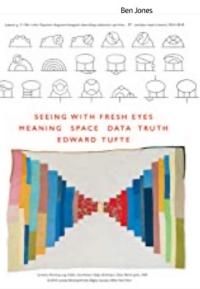
# Books On My Shelf for Beginners/My Students!

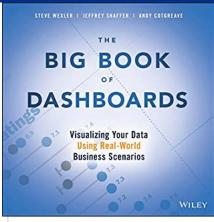


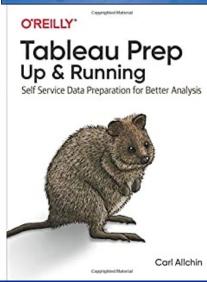
Pearson

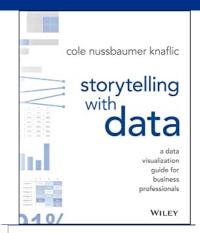
O'REILLY"

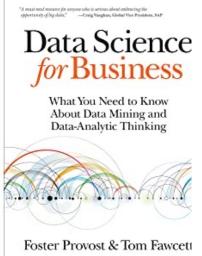


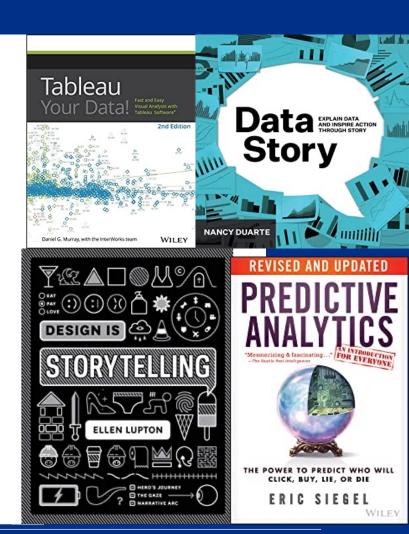






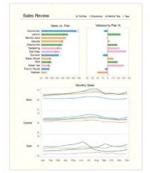


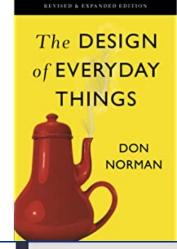




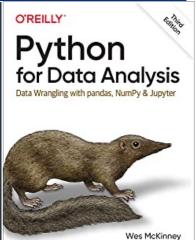
# Books On My Shelf for Beginners/My Students!

Show Me the Numbers Designing Tables and Graphs to Enlighten







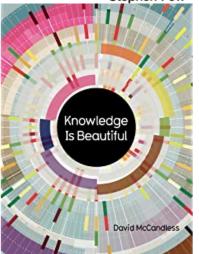


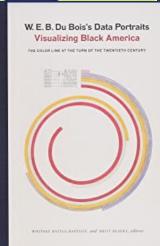


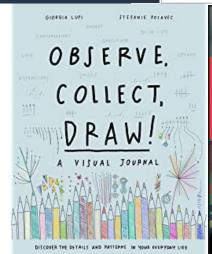
**Jakob Nielsen** 

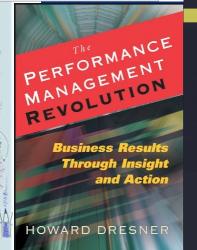
Designing Web Usability

Stephen Few













# Free Community Initiatives:

<u>Project Name</u>		<u>Topic</u>	
1 Back to Viz Basics	Great project to start with	Varies	https://www.tableau.com/events/tc/2022/back-2-viz-basics
2 Data Plus Music		Music	https://www.hipstervizninja.com/blog/dataplusmusic/
3 DataFam Con		Pop culture	https://www.tableau.com/blog/what-tableau-community-project-datafam-con
4 Diversity in Data		Diversity	https://data.world/diversityindata
5 #DuboisChallenge		Diversity History	https://nightingaledvs.com/the-dubois-challenge/
6 EduVizzers		Higher Education	https://eduvizzers.com/
7 Games Night Viz		Video games	https://www.tableau.com/blog/games-night-viz
8 Iron Quest		Varies	https://sarahlovesdata.co.uk/2018/12/20/introducing-iron-quest/
9 Iron Viz		Varies	https://www.tableau.com/community/iron-viz
10 Makeover Monday	Great project to start with	Varies	https://www.makeovermonday.co.uk/
11 Map Prompt Monday		Mapping	https://github.com/MapPromptMonday/MapPromptMonday
12 Preppin' Data		Data prep challenge	https://www.preppindata.com/
13 Project Health Viz		Healthcare	https://vizzendata.com/projecthealthviz/
14 Public Policy Viz		Public policy	https://publicpolicyviz.com/
15 Real World Fake Data		Varies	https://sonsofhierarchies.com/real-world-fake-data/
16 Romanian Data Tribe		Romania	https://data.world/romanian-data
17 SDG Viz Project		UN's Sustainable Development Goals	https://thesdgvizproject.com/
18 Sports Viz Sunday		Sports	https://www.sportsvizsunday.com/
19 Storytelling With Data		Varies	https://community.storytellingwithdata.com/
20 Viz For Social Good	Great project to start with	Non-profit	https://www.vizforsocialgood.com/
21 Viz for Vets		Veterans	https://www.vizforvets.com/datasets/
22 Viz Office Hours		Feedback forum	http://bit.ly/vizoffice
23 Viz 2 Educate		Education Resources	https://viz2educate.com/
24 Workout Wednesday		Technical challenge	https://www.workout-wednesday.com/



# My office is always available – Zoom & Email



@DocKevinElder

https://linkedin.com/in/docelder/

kelder@latech.edu

dockevinelder@dresneradvisory.com

318-257-2647

http://bit.ly/3XRqEN4 ← Slides →







#ProfessorForTheDay