Bootcamp Info Sheet

Instructor

Name: *Christian Wernz*

Bio: *Dr. Christian Wernz combines 20+ years of teaching, industry, and research experience to provide innovative, engaging, and effective learning experiences for practitioners who seek to expand their data science knowledge and hands-on skills. Dr. Wernz is currently working as a Senior Data Scientist at UVA Health. Prior to this industry position, he worked for over a decade as a professor in Industrial and Systems Engineering at Virginia Tech, and in Healthcare Analytics at the Virginia Commonwealth University (VCU). He has a deep expertise in healthcare and has worked with and for leading healthcare organizations in the US and around the world on projects in the analytics and data science space. Beyond healthcare, Dr. Wernz also had stints at McKinsey & Co., Dell, BMW, Rolls-Royce, and other manufacturing, information technology, and service organizations. Dr. Wernz received his doctorate in Industrial Engineering and Operations Research from the University of Massachusetts Amherst. He obtained his bachelor's and master's degrees in Business Engineering from the Karlsruhe Institute of Technology (KIT) in Germany.*

Bootcamp Details

Bootcamp Title: *Introduction to Tableau*

Number of Days: *4*

Hours per Day: *3*

Type of Instruction: *Lecture with hands-on exercises, chat, and polling questions*

Description: *Students will learn to manipulate data in Tableau and build visualizations using this dynamic, robust tool. By the end of this program, students will be able to build interactive data visualizations, aggregate and filter data, and create a data dashboard in Tableau. Learners will need to provide their own licensed version of Tableau to participate in this course.*

Target Audience: *This course is designed for students looking to take their data analysis skills to a more advanced level and learn how to communicate effectively with data.*

Technologies: *Learners will need to provide their own licensed version of* ***Tableau Desktop 2024.3.3.***

Prerequisites: *While there are no prerequisites for this course, it is best suited to attendees with some experience manipulating data and creating and interpreting data visualizations.*

Student References: *Class slides and exercise files.*

Bootcamp Syllabus

Day 1

a. Explain the need for Tableau and describe its features
a. Describe how data sources connect to Tableau
b. Import the given dataset into Tableau
c. Explain the concept of Relationships
d. Explore the Tableau platform layout
e. Create basic visuals
f. Aggregating, binning, and grouping

Day 2:

a. Filtering capabilities of Tableau
a. Discuss formatting options in Tableau
b. Explain the concept of functions
c. Implement basic functions on the dataset
d. Introduction to table calculations

Day 3:

a. Implement table calculations with dataset
b. Understand addressing and partitioning fields
c. Explore level of detail (LOD) functions
d. Implement number calculations
e. Implement aggregate calculations
f. Implement string calculations

Day 4:

a. Implement date calculations
b. Implement type calculations
c. Implement logic calculations
d. Introduce the concept of geospatial visualization
e. Implement geospatial visualization for given dataset
f. Identify and correct errors to facilitate proper joining with geospatial data
g. Introduce the concept of dashboards
h. Combine previously created visualizations into a dashboard