Tableau Consulting Services by Cognitive Convergence

"Tableau with a motive to change the way you think and understand data!
*Let us help you to evolve your traditional data using Tableau"*_____

Cognitive Convergence
http://www.cognitiveconvergence.com
+14242530744
shahzad@cognitiveconvergence.com

About Us

Cognitive Convergence have good mix of data analytics, visual design, and strong business acumen with great creativity and problem-solving skills. Cognitive Convergence is a recognized expert that provides consulting services that help

- In designing, deploying, managing, enhancing or troubleshooting on-premises, cloud-based or hybrid Tableau environment.

- To start fresh with Tableau to modernize current business analytics solution or revamp existing Tableau deployment by incorporating new data sources or adding new services.

Our Core Consultancy include following:

- User Friendly Reports
- Hybrid deployment support
- Business Insights
- Self-service data preparation

- Powerful Analysis
- Proof of Project
- Strategic Analysis
- APIs integration

Cognitive Convergence
http://www.cognitiveconvergence.com
+14242530744
shahzad@cognitiveconvergence.com

2

What is Tableau

"Tableau is a data visualization tool that lets us analyze virtually any type of structured data and produce highly interactive and attractive graphs, dashboards, and reports in minutes."

- Tableau is a powerful and fastest growing data visualization tool used in the Business Intelligence Industry.

- It helps in simplifying raw data in a very easily understandable format.

- Tableau allows for instantaneous insight by transforming data into interactive visualizations.

- Tableau helps create the data that can be understood by professionals at any level in an organization.

- Data analysis is very fast with Tableau tool and the visualizations created are in the form of dashboards and worksheets.

The best features of Tableau software are
- Data Blending
- Real time analysis
- Collaboration of data

Core Features of Tableau

Tableau has many features that make it unique and flexible at a same time for making visualizations and dashboards.

- Speed to market
- Easy to use
- Collaboration and distribution
- Multiple data sources connection
- Advanced visualization
- Easy importation and exportation of the massive size of data.
- Robust Security

Why use Tableau

- Tableau helps turn insight into action, cut down analysis time, and change behaviors that help everyone be more data-driven across the business.

- For easy accessibility and analysis, the data file can be downloaded locally on mobile or desktop, multilingual representation of data, real-time exploration of any dataset, etc.

- Provide Beautiful Dashboards And Reports

- Interactivity and segmentation on-the-fly

- Conduct Investigative Or Exploratory Analysis At The Speed Of Thought

- Control Data, Access, User Permissions, And Dashboards In A Secure And Scalable Format Both On-Premise Or In The Cloud

Cognitive Convergence Tableau Consulting Services

Cognitive Convergence combines precision, extensive experience, expertise, and in-depth industry knowledge that is used to

- Provide an unprecedented Tableau solution, as well as a smooth implementation of Tableau that allows to create a road map that helps optimizing data, processes and business goals.

- Combine experts functionalities with Tableau and enhance the range of functionalities.

- Leverage the potential of data with deep expertise in Tableau deployment, modification, integration, and management for specific business requirements.

- Develop a clear, tailored plan with a roadmap that outlines needs and outcomes, aligns teams and requirements to best facilitate with Tableau services.

- Provide service to amplify profits and sales, assist retailers with accomplishing a more profound comprehension of estimating, POS, channels, and clients.

- Use improved management, accomplish consistency, and secure information while giving individuals admittance to experiences

- Rejuvenate applications with data. Effectively embed intuitive visuals and convey convincing reports on any gadget.

Structuring Data

Cognitive Convergence team use its expertise to

- Speedup data preparation

- Connect and import data from a variety of data sources, including files, feeds, databases, cloud storage, API/connectors, major business applications, and even in-house apps, with confidence.

- Use Tableau Prep and extensions to make the ETL process more adaptable, fluid and efficient in terms of getting data into usable formats.

- Evaluate millions of rows of data in seconds using Tableau's Data Engine.

- Build effective reports, we smoothly merge data from numerous data sources.

- Provide immediate solutions to any of your pressing business issues

Project Planning

Our Experts define your organization's vision for analytics, identified executive sponsors and project team members, documented the current state of your enterprise architecture, and assessed the usage of data and analytics among each business team.

Our Experts identifies:

- What is your vision, and what are your strategic initiatives, business goals, and challenges?

- Who are the executive sponsors and project team members?

- How is data selected and managed, distributed and consumed, and secured?

- What use cases are most impactful?

- How will you ensure trust and confidence in data with responsible usage?

- What is a job function's relationship with data?

- Who will be using Tableau, and what licenses are required?

Data Visualization

Experts at Cognitive Convergence produce beautiful visuals to

- Employ creativity and innovation to create dashboards and reports that are actionable, insightful and compelling.

- Build detailed dashboards, that are easy to understand, and simple to utilize.

- Make easier back-end calculations, results in improved performance by special designed queries and scripts.

- Provide multi-level drill-down for specific data and perform specialized computations to address more difficult challenges.

- Use design and visual cognition best practices to guarantee our dashboards are developed with the proper audience in mind.

- Use visual science precepts like alignment, containment, position, color, closeness, and enclosure to their full potential.

Tableau Prep and CRM

Tableau CRM

Tableau CRM is an end-to-end analytics solution with powerful data management, data visualization, and predictive analytics capabilities. Built on top of Salesforce, Tableau CRM enables end users to take action from within their work environment. Tableau CRM helps to

- Connect to CRM data directly
- Take actions based upon insights quickly
- Analyze a huge amount of data and get predictive analytics
- Automate actions with inbuilt applications
- Data integration, Preparation and Synchronization
- Data Exploration using lenses, Dashboards, Embed visuals in Salesforce.
- Predictive Analysis using Einstein Analysis.

Tableau Prep

Tableau Prep Builder is a tool in the Tableau product suite designed to make preparing data easy and intuitive. Tableau Prep builder helps to
- combine, shape, and clean data for analysis
- cleaning, automating, administering and sharing of data
- Provides complete picture of data with a visual interface
- **Prep Builder:** Combine, shape, and clean data for analysis with Prep Builder.
- **Prep Conductor:** Share data flows and manage them at scale with Prep Conductor. Tableau Prep Conductor is part of the Tableau Data Management Add-on.

Web Data Connector

Web data connectors (WDCs) are web pages that provide a data connection that is accessible over HTTP for data sources that don't already have a connector in Tableau. WDCs allow users to connect to almost any data that is accessible over the web and to create extracts for their workbooks. Data sources for a WDC can include internal web services, JSON data, REST APIs, and other sources that are available over HTTP or HTTPS.

Our experts combine their expertise with Web Data Connector to provide

- Data Accessibility – that allow connection of data from any source from internet, scripts can be written that use APIs to extract data
- Automation – to provide automation of data downloading
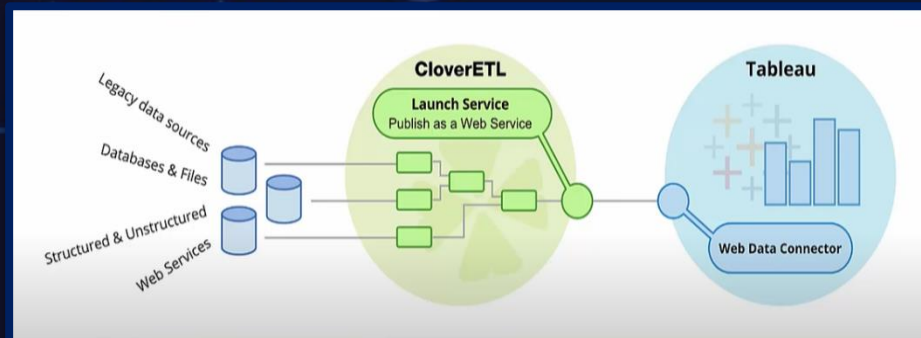
Connector SDK

Tableau connector SDK, create a connector that use to visualize data from any database through an ODBC or JDBC driver. It allows to customize connector behavior, fine-tune SQL generation, use the connectivity test harness to validate the connector behavior during the development process, and then package and distribute the connector to users. Using Tableau connector SDK our experts help in providing.

- Better live query support.
- Allow to customize the dialect used to generate SQL queries so they are compatible and optimized for database.
- Simpler connection experience.
- Provide a simple customized connection dialog.

Rest API

- Tableau Server provides an application programming interface (API) that lets programmatically manage users, workbooks, data connections, and other resources on the server.

- By using the API, create users or import them from Active Directory, publish workbooks, create, view, and delete data sources, and perform other actions on the server.

- The REST API methods provide more granular control over interaction with the server

- The API gives simple access to the functionality behind Tableau data sources, projects, workbooks, site users, sites, flows, and more.

- This access can be used to create your own custom applications or to script interactions with Tableau resources.

DOCUMENT API

Document API

The Document API provides a supported way to programmatically make updates to the database connection strings inside Tableau workbooks and data sources, provides developers with tools to programmatically make updates to Tableau workbooks and data source files.

➢ Create and deploy templates or migrate workbooks from test to production data sources.
➢ Duplicate workbook
➢ Modify data source settings
➢ Extract a list of fields from a data-source
➢ Getting information from workbook
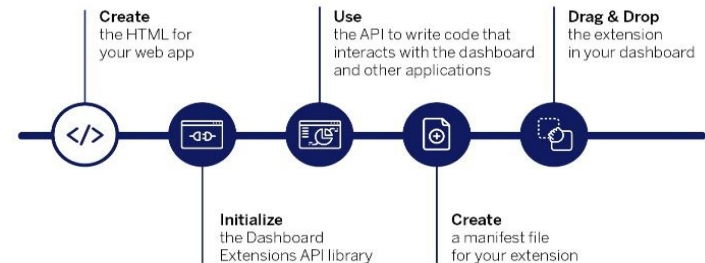➢ Update data connections in a published workbook.

EXTENSION API

Extension API

Cognitive Convergence developers use Extensions API to create dashboard extensions that enable customers to integrate and interact with data from other applications directly in Tableau
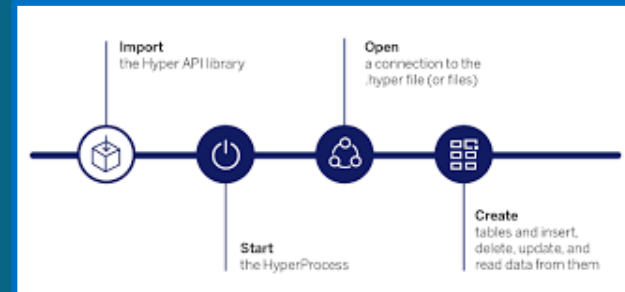
➤ Create an extension that has write-back functionality, to modify data in a viz and have that change automatically update the source data in the data base or web application

➤ Build custom viz and interactivity types such as a filter replacement with a custom interface and network diagram

➤ Integrate 3rd party functionality inside the dashboard

➤ Interact with data from other business applications directly in Tableau

➤ Customize Tableau's Desktop environment for a specific team's workflow

Create the HTML for your web app

Use the API to write code that interacts with the dashboard and other applications

Drag & Drop the extension in your dashboard

Initialize the Dashboard Extensions API library

Create a manifest file for your extension

Hyper API

Hyper API is library for working with local .hyper files (aka extracts) in all conceivable ways: create them, insert data into them, update, delete, or read that data. Hyper is Tableau's SQL-based relational database engine and .hyper files are in fact relational databases. Cognitive Convergence experts use Hyper API to
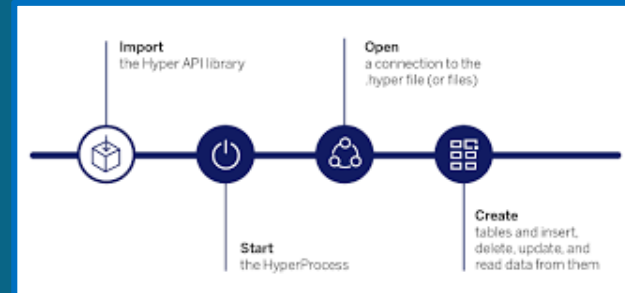
- Create, read, update, and delete data in .hyper files (also known as CRUD operations).
- Leverage the full speed of Hyper for creating and updating extract files.
- Load data directly from CSV files, much faster, and without having to write special code to do so.
- Use the power of SQL to interact with data in .hyper files. The Hyper API provides methods for executing SQL on .hyper files.

Import
the Hyper API library

Open
a connection to the .hyper file (or files)

Start
the HyperProcess

Create
tables and insert, delete, update, and read data from them

METADATA API

Tableau's Metadata API enables to explore data assets and content on Tableau Server or Tableau Online, and query the corresponding metadata that have been indexed by Tableau Catalog. Our experts use Meta Data API to

- Discover data associated with the content published on Tableau Online site or Tableau Server.
- Track lineage, i.e. the relationships between assets, like data sources and workbooks
- Perform impact analysis. Using upstream and downstream lineage information
- Allows to evaluate the impact of changes to content.
- Ensuring that calculations are named properly and no duplicated calculations are created

Import
the Hyper API library

Open
a connection to the .hyper file (or files)

Start
the HyperProcess

Create
tables and insert, delete, update, and read data from them

JavaScript API

Use the Tableau JavaScript API to integrate Tableau visualizations according to the requirement of web applications. Our experts use JavaScript API to

➢ Display visualizations from Tableau Server, Tableau Public, and Tableau Online on web pages.

➢ Dynamically load and resize visualizations.

➢ Filter the data displayed in visualizations with HTML controls on the page.

➢ Select marks in visualizations.

➢ Respond to events in visualizations.

➢ Export visualizations to an image or PDF file.
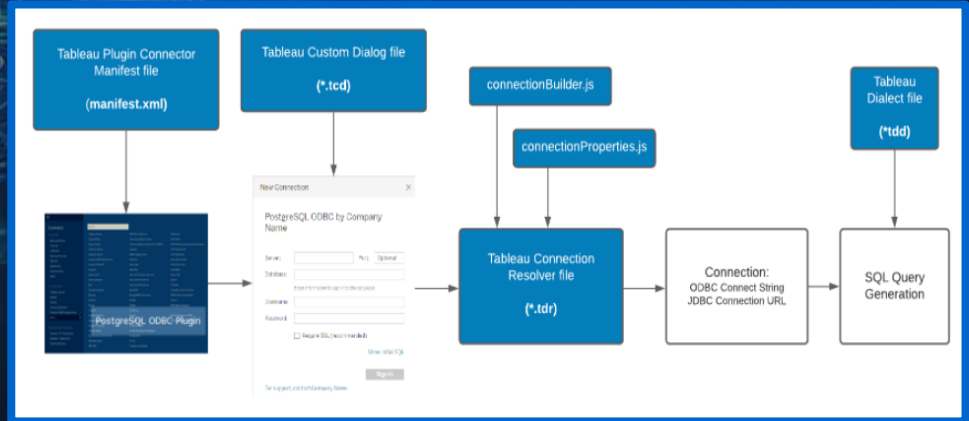
Webhooks API

Webhooks are automated messages sent from Apps when any event/thing happens. They deliver a Message or Payload to a certain URL, which is the App's phone number or location.

➢ When an extract refresh fails, file a ticket in ServiceNow automatically.

➢ When a workbook is updated, notify your team via their Slack channel.

➢ When a data source is published, email a data steward asking them to review and certify it.

➢ When a workbook refresh completes successfully, generate a PDF and post it to SharePoint.

➢ Get automatic notifications of Tableau events to your external application or workflow.
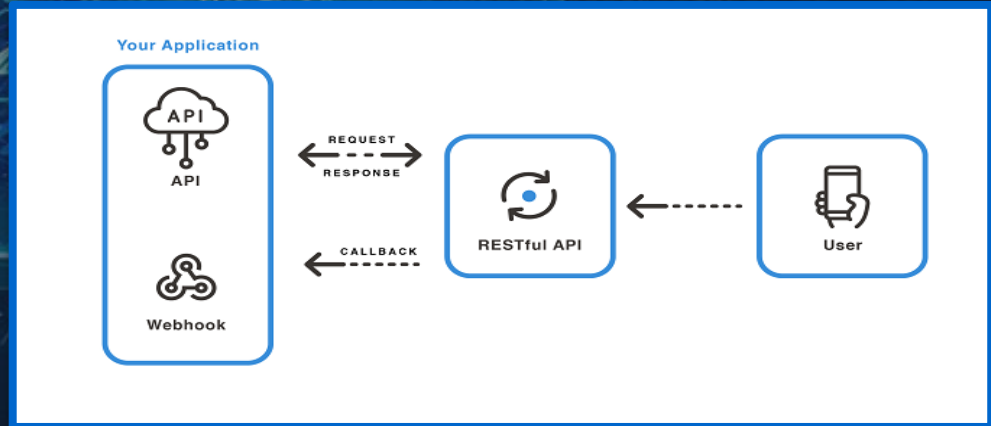
Mobile App Bootstrap

The Mobile App Bootstrap is a sample open-source mobile app that demonstrates how to connect and stay signed in to Tableau Servers, embed Tableau content, and utilize the Tableau JavaScript API to embed the Tableau content to have right at fingertips.

➢ Cognitive Convergence experts use
➢ Delightful native mobile apps and support for web browsers, and allow Tableau content to be embedded in other apps.
➢ For connecting to and embedding interactive Tableau content in their app.
➢ Helps developers implement features like "keep me signed in" and leverage the JavaScript API to build additional interactivity with dashboards.

Tableau Integration

Tableau Data Source connectors allow to connect with a variety of data sources which are as follows:

- Tableau Data Connectivity to a File
- Tableau Data Connectivity to a Server

Tableau supports integration with almost all the data sources. Cognitive Convergence experts use Tableau to extract data from any platform and analyze it. Pulling data from simple CSV files, PDFs, spreadsheets to complex Databases such as Oracle and Cloud Databases and Data Warehouses can easily be accomplished.

There are still a wide variety of data sources that are not directly supported by it. To help users establish connections with unsupported Tableau Data Sources seamlessly, Cognitive Convergence experts' help develop the following functionalities were introduced

- Web Data Connector
- ODBC Connector
- Extract API
- Hyper API

Tableau Integration with R

Integrating R Notebooks and R shiny with Tableau enables us to take advantage of the various statistical analysis and machine learning packages in R. This h helps to have descriptive, inferential and predictive analytics in our Tableau story/dashboard by combining them we bring together the visualization flexibility of Tableau and the statistical power of R.

- Logic is contained within the API, preventing arbitrary code execution on the server.
- RStudio Connect is a commercially-supported platform that provides access management, dials for tuning performance to meet the expected demand, and the ability to manage dependencies for multiple versions of R and Python on a per-project basis.
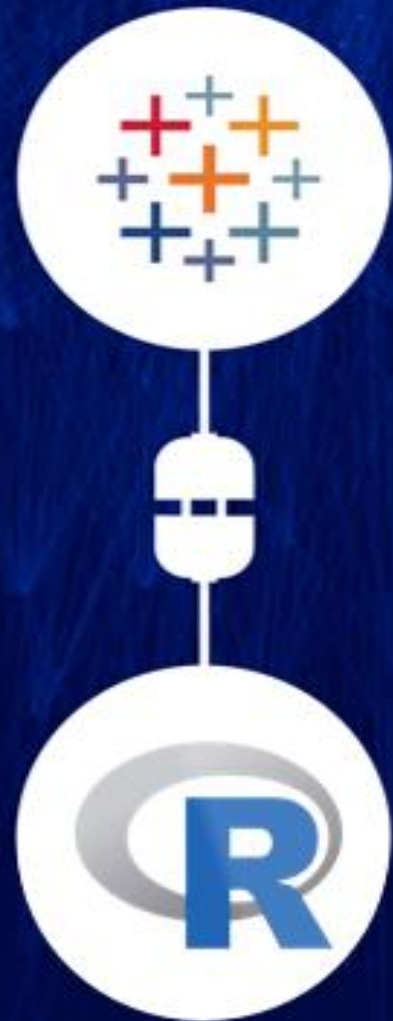
Python Integration

Tableau Server

Tableau Server Client (TSC) and Python Pandas connecting with a local Tableau Server admin user and using Personal Access Token (PAT).
Help building better dashboards and advanced analytics to draw insights out of it.
➤ Handle the data exploration and visualization along with data science logic to better handle business use cases.
➤ Understand, analyze and visualize to takes a major part before modelling the data, proper data cleaning and preparation is needed.

Tabpy

Tabpy is a Python package that allows to execute Python code on the fly and display results in Tableau visualizations. Cognitive Convergence team use tabpy to
➤ Help building better dashboards and advanced analytics to draw insights out of it.
➤ Handle the data exploration and visualization along with data science logic to better handle business use cases.
➤ Understand, analyze and visualize to takes a major part before modelling the data, proper data cleaning and preparation is needed.
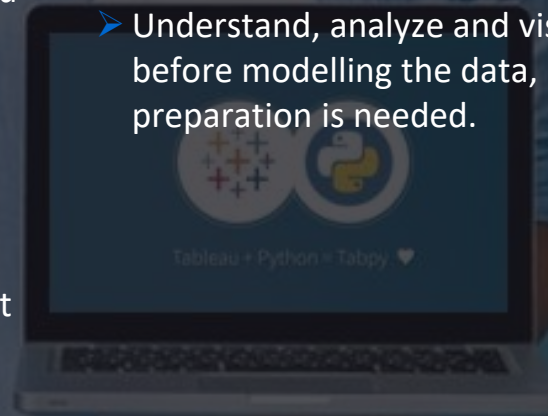
We've perfected the art of balancing visually appealing Tableau displays with powerful data analyses. Give us some information and a goal, and we'll take care of the rest.

Tableau Integration Strategy

The key to widespread tableau adoption inside the firm is a good tableau integration. Cognitive Convergence's Tableau experts are well-versed in the difficulties that come with integrating tableau into regular operations. We've adopted tableau throughout all departments and organizations, each with its own set of considerations.

Product Affinity Analysis

We can dig deep into your data requirements and draw out a clear path to success. Our experts lay out a detailed plan of what they will accomplish for you and how it will help your company. You can count on us to look after your data at all times.

Proof of Project

Cognitive Convergence's Tableau consulting services are designed to improve data analysis through persistent efforts by the team, down to the smallest of details.

Industrial Use Cases

Linkedin

Tableau Server is accessed on a weekly basis by 90 percent of LinkedIn's sales force.

Amazon

There is a Tableau's connector to Amazon Auror. Other connectors are Amazon EMR and Amazon Redshift.

Ferrari

Ferrari use Tableau desktop as business Intelligent tool.

Cisco

Cisco uses Tableau software to work with 14,000 items to evaluate product demand variability

Adobe

Adobe also added components to their data warehouse that empower clients to make a Tableau Extract specifically from inside the Adobe Marketing Cloud.

Deloitte

Deloitte uses Tableau to help customers implement a self-reliant data-driven culture which is also agile and can garner high business value from enterprise data.
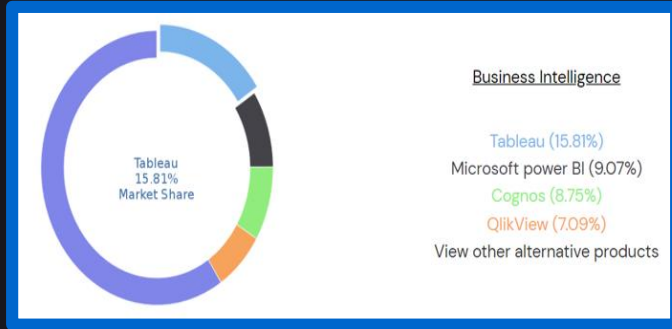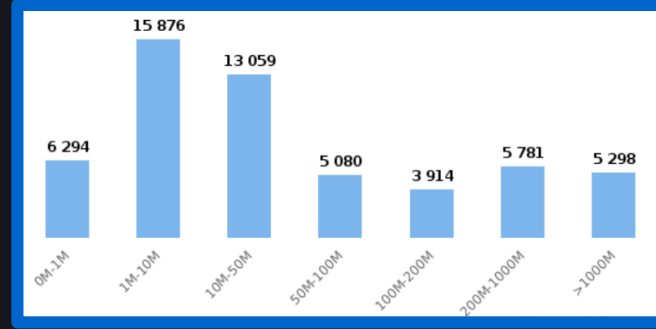
Industrial Use Cases

Tableau Market Share and Competitors in Business Intelligence

The companies using Tableau are most often found in United States and in the Computer Software industry. 63251 companies using Tableau. It has a market share of about 15.8%.

Distribution of companies that use Tableau based on company size (Revenue)

Of all the customers that are using Tableau, a majority (61%) are small (<$50M), 21% are large (>$1000M) and 10% are medium-sized

Why Cognitive Convergence?

We keep your data safe
We help you configure Tableau Server to share data across your organization with complete confidence so both your data and your analytics are governed, secure, and accurate
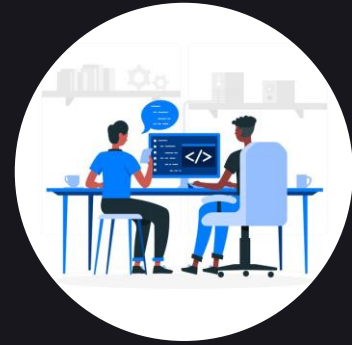
We offer a personalized and agile approach
We work closely with you throughout the process and seek constant feedback to deliver as per your expectations.
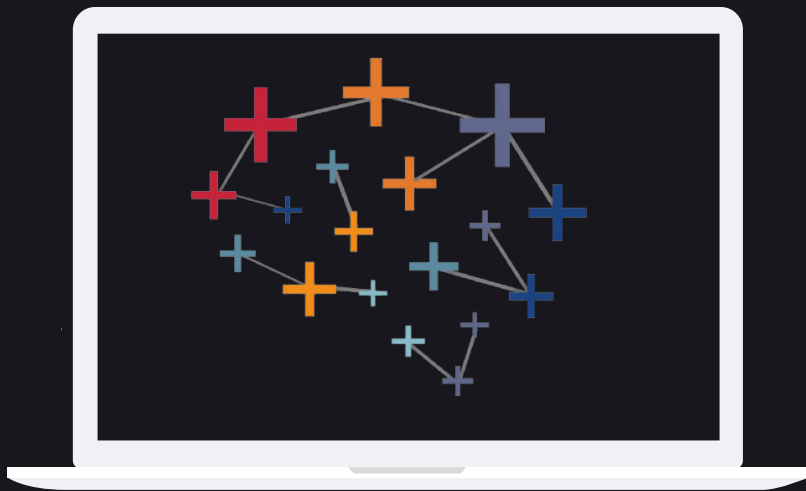
We give out of the box solutions
We help you get the most out of Tableau with innovative, scalable solutions- whenever you hit a roadblock.

We are flexible
We are available with support for quick ad hoc sync-ups and adding improvements to the solution on the fly.

THANK YOU

Shahzad Sarwar
Cognitive Convergence
http://www.cognitiveconvergence.com
Voice: +1 4242530744
Skype: Shahzad.Sarwar.Online
shahzad@cognitiveconvergence.com