

Building Interactive Dashboards



Sharad B Nalawade

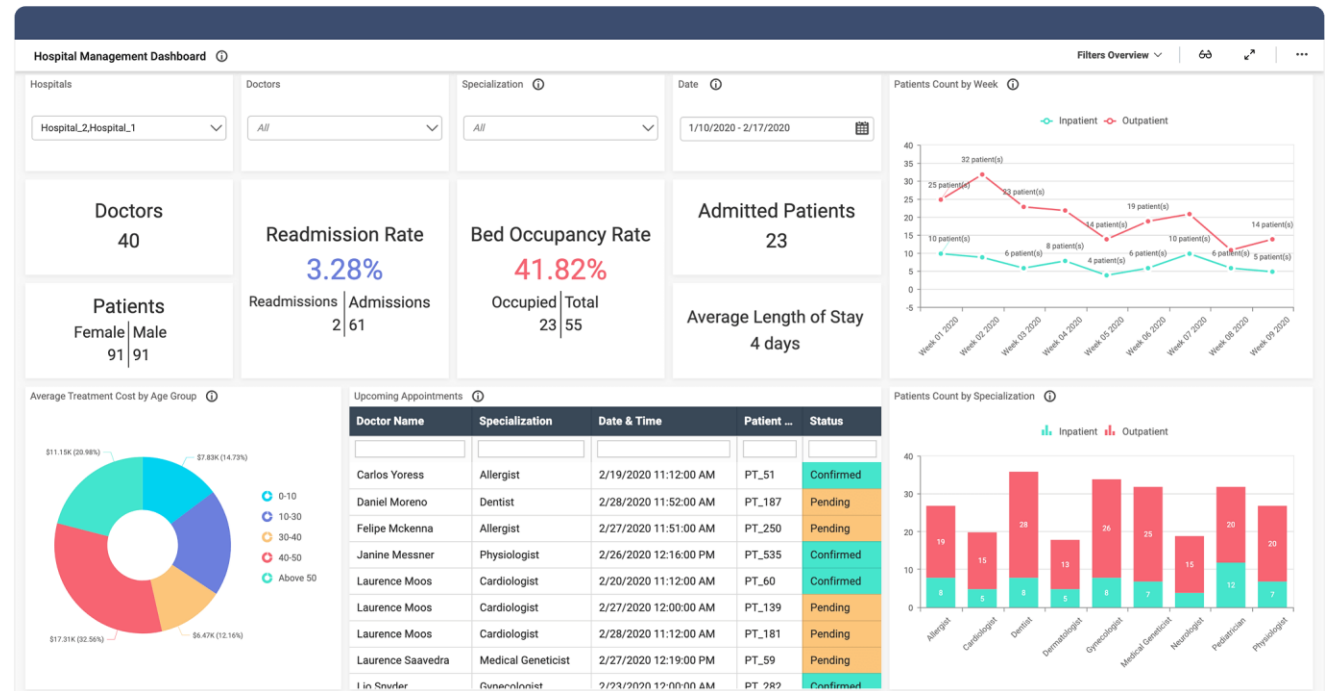
Trainer Profile: Sharad Nalawade



- 35 years in the IT industry
- Founder – ***Ultitude Consulting***, India
- President – ***Ambharii Labs***, USA
- Stints at ***Cisco, Accenture, Symantec, Wipro, C-DoT and CMC Ltd.***
- Consultant on emerging technologies – Data Science, Machine Learning, Cloud Computing, RPA, Digital Transformation, Solution Design and Enterprise Architecture
- Author of three books on Science and Technologies
- Visiting Faculty at IIT-Jodhpur, IIM-Rohtak, IIM-Indore, IIM-Lucknow

What is an Interactive Dashboard?

- A single window to critical performance parameters, be it business or operations
- It helps to monitor and track changes as they happen
- A great tool for date driven decision making



Differences between Static and Interactive Dashboard

Static	Interactive
Data is stale unless updated manually	Data is real time, as it happens
Answers specific questions	Answers any question interactively across multiple levels
Need to generate multiple reports to get for different data sources	Combined view of multiple data sources
Needs time for analysis	Faster decision making
Static interface	Visually dynamic
Limited trend and what-if analysis	Explorative data analytics and storytelling

Enterprise Reporting using Interactive Dashboards

Enterprise reporting is the creation and distribution of business performance reports.

It provides an interactive, visual summary of business KPIs, trends, what-if-analysis, views of business performances both at a high-level and drilled-down levels.

Typically, tables, metrics, interactive dashboards, graphs, insights are shown as a part of the report.

Samples of Enterprise Reporting

- Customer Profitability Report
- HR Performance Report
- Procurement Analysis Report
- Retail Business Analysis Report
- Sales and Marketing Report
- Supplier Quality Analysis Report
- IT Spend Analytics Report

Benefits of Enterprise Reporting

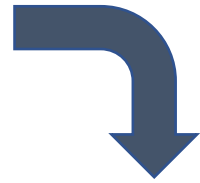
- Enables C-level decision making better and faster
- Provide invaluable and highly insightful views of the business
- Enables creation and sharing of reports across organization
- Promotes disciplined approach to reporting

Capabilities Needed for Enterprise Reporting

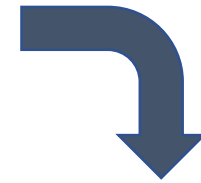
- Interactivity with tables, charts with sorting, filtering, conditional formatting, zooming in/out
- Report design in terms of visualization, text, images, UI, etc.
- Self-service to enable non-technical users to drag and drop to create customised version of the reports
- Open architecture to pull data using RESTful APIs from different sources
- Multi-tenant support for sharing reports, embed them their apps and control access to its usage
- Distribute in any format – PDF, XLS, HTML, XML, JSON, PPT, CSV, RTF, JPEG, etc.

Know your customer through their data

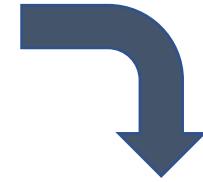
Know your audience



Collect relevant datasets

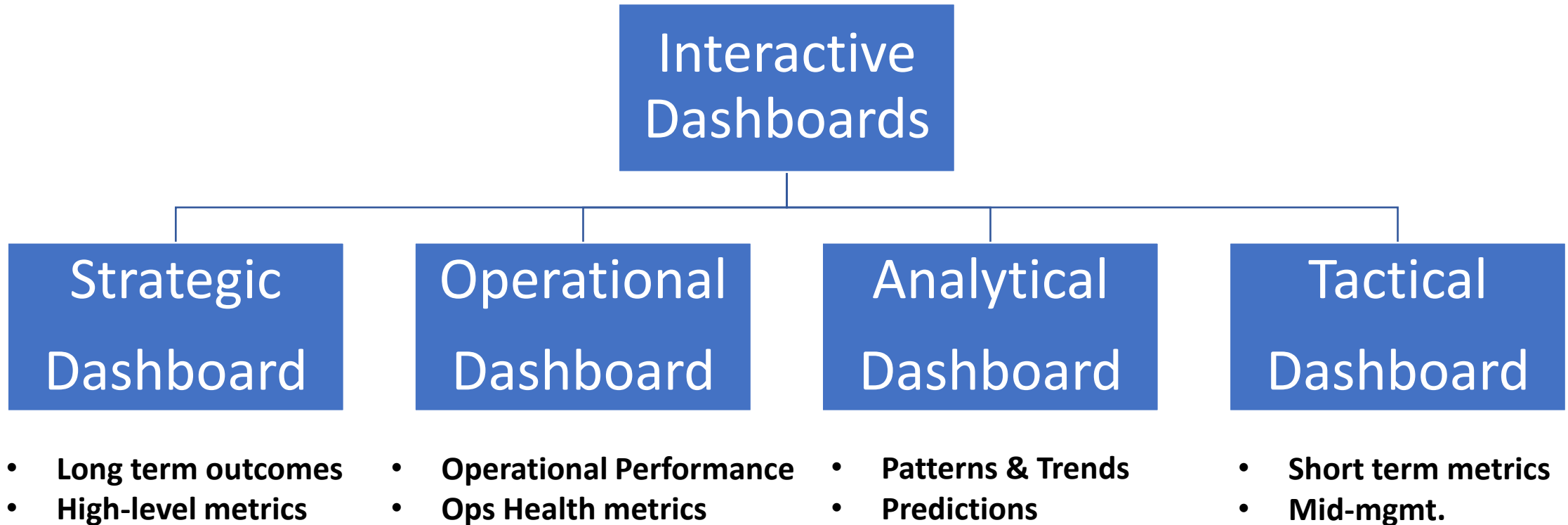


Choose the right analysis



Choose the right chart

Types of Dashboards



Role based Dashboards

SN	Dashboard	KPIs
1	Management Dashboard	<ul style="list-style-type: none"> Quarterly Revenue # of customers added Avg revenue per customer Customer Acquisition Cost
2	CMO Dashboard	<ul style="list-style-type: none"> # Leads generated (MQL & SQL) Conversion Rate Avg Ad spend per customer
3	CFO Dashboard	<ul style="list-style-type: none">
4	Manufacturing Production Dashboard	<ul style="list-style-type: none"> Quantity/Volume produced per a time period Product backlogs # Defects Manufacturing Cost 6
5	CTO Dashboard	
6	Talent Management Dashboard	<ul style="list-style-type: none"> Demand versus Supply Talent attrition rate Talent Rating
7	Hospital Admin Dashboard	-----

Demo of Interactive Dashboards

Interactive Dashboards Demos

Marketing Lead Trends Dashboard

<https://www.inetsoft.com/sree/app/viewer/view/global/gallery/Marketing%20Leads>

Call Centre Team Performance Dashboard

<https://www.inetsoft.com/sree/app/viewer/view/global/gallery/Call%20Center%20Analysis>

Call Centre Monitoring Dashboard

<https://www.inetsoft.com/sree/app/viewer/view/global/gallery/Call%20Center%20Monitoring>

Executive Sales Summary Dashboard

https://www.inetsoft.com/evaluate/bi_visualization_gallery/dashboard.jsp?dbIdx=8

Global Visual Dashboard

[Global Visual Analysis \(inetsoft.com\)](https://www.inetsoft.com)

Source: Inetsoft.com

What is Dash



[Dash Enterprise App Gallery](#)

Developed by **Plotly** company

Dash is the original low-code framework for rapidly building data apps in Python, R, Julia, and F# (experimental).

Dash is built on top of **Plotly, Flask and React**

Dash apps are rendered in the web browser. You can deploy your apps to VMs or Kubernetes clusters and then share them through URLs.

Since Dash apps are viewed in the web browser, Dash is inherently cross-platform and mobile ready.

Top Enterprise Report Building Tools/Languages



Why Dash

- Various data visualization to dashboards
- Interactive
- Highly customizable
- Easy to share
- Open source

<https://dash.gallery/Portal/>

Python EDA Examples Demos in Jupyter Notebook



Power BI

EDA Demos
using
Power BI
Desktop

Questions?