

## 1.INTRODUCTION

### 1.1 Overview

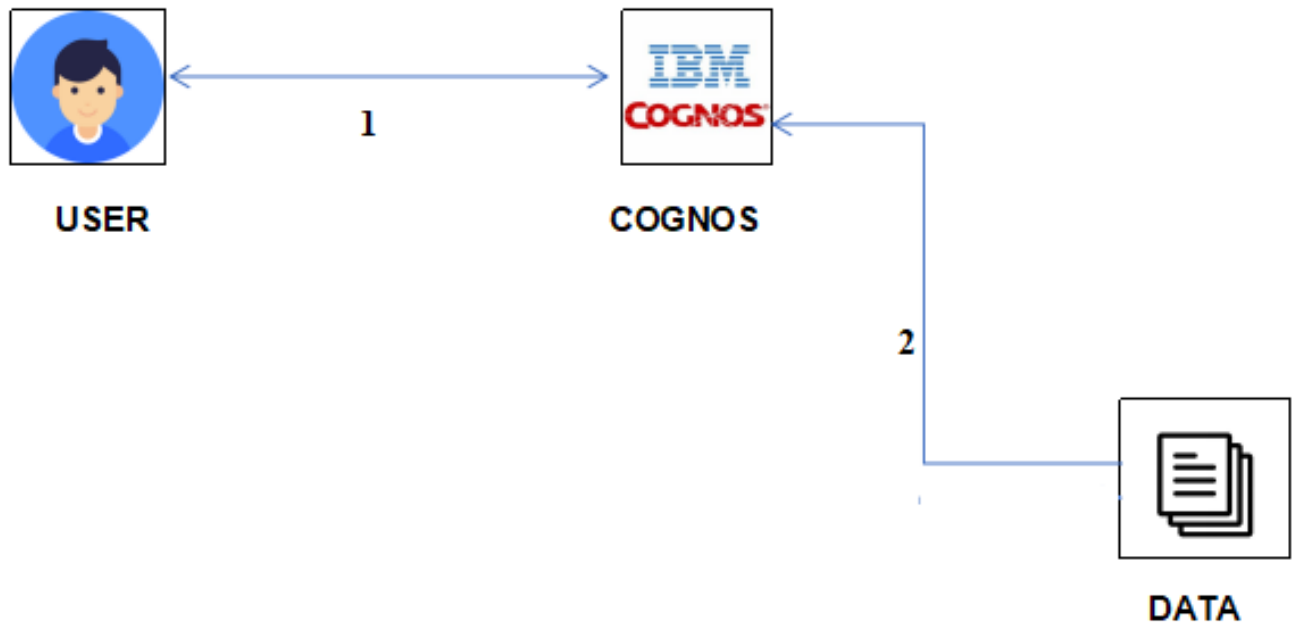
Project title : Crop Production Analysis Using IBM Cognos Dashboard

- Crop production in India is one of the most important sources of income and India is one of the top countries to produce crops . As per this project we will be analysing some important visualization ,creating a dashboard and y going through this we will get most of the insights of the crop production in India.

- Crop: when plants of same kind are grown and cultivated at one place on a large scales,it is called a crop.Different types of crop require different climatic conditions.

- crop production practices,preparations of soil,sowing,adding manure and fertilizers,irrigation,protection from weeds,harvesting,storage.

- Cropping pattern: India is a vast country.The climatic conditions like temperature,humidity and rainfall vary from one region to another.Accordingly,there is a rich variety of crops grown in different parts of the country.



## 2. LITERATURE SURVEY

- Solution requirements



- This project is to show that different types of crops are grown in different climatic conditions.

- for our project we will be using IBM cognos analytic:

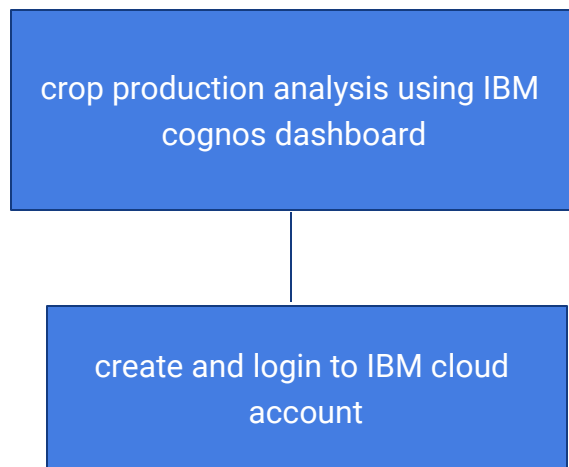
1) first sign in, in IBM cognoscenti analytic.

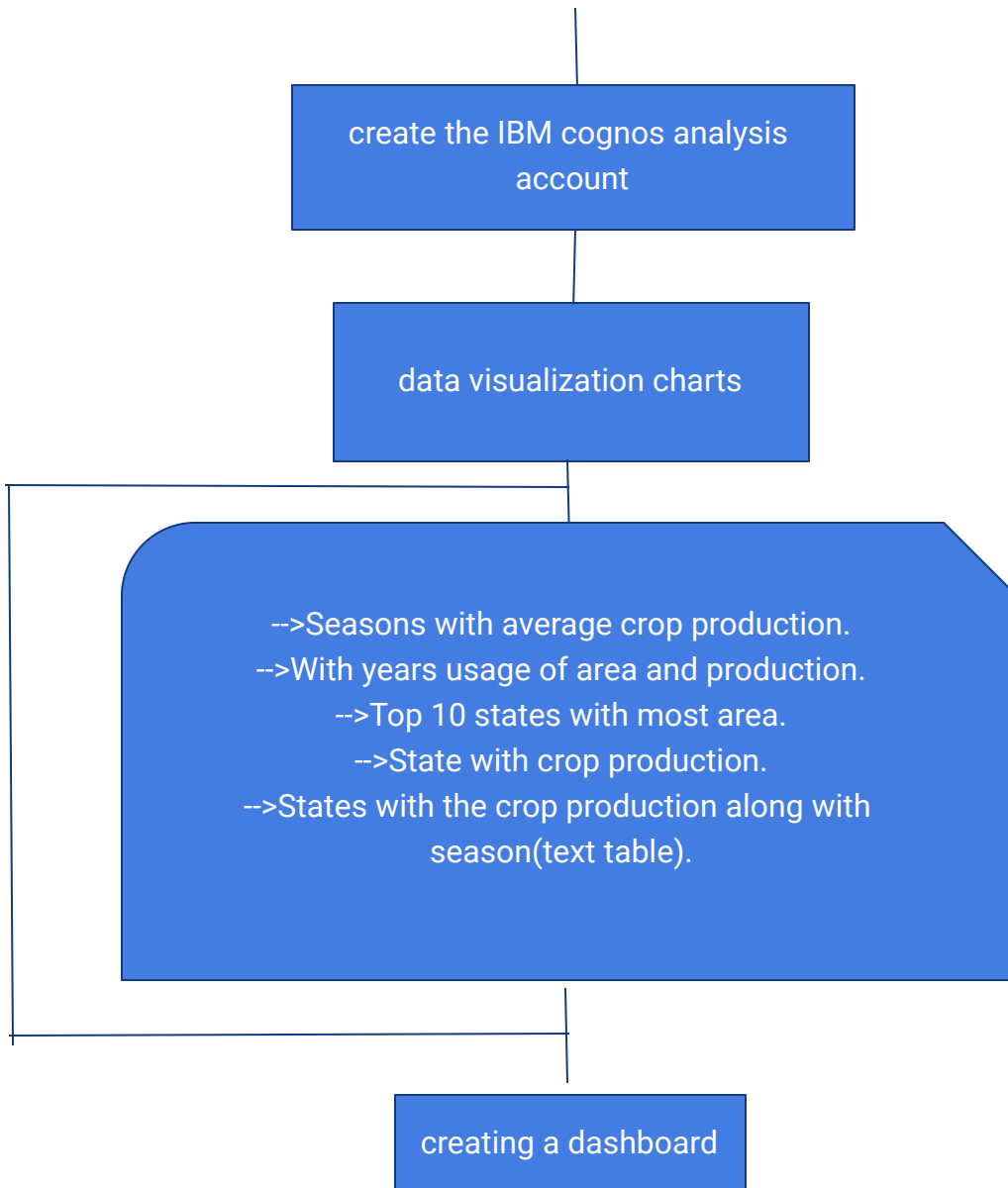
2)create a dashboard and

- In first tab show the graph of Different seasons with average production in India.
- In second tab show the area graph and line graph,with years usage of area and crop production.
- In third tab show the top 10 states most area.
- In fourth tab show the state with crop production.
- In fifth tab show the states with the crop production along with season.
- In sixth tab copy and paste the all the graphs in it and save the dashboard.

### 3. THEORITICAL ANALYSIS

\* diagrammatic overview of the project





## HARDWARE/SOFTWARE DESIGNING

Hardware and software requirements of the project.

## Software requirements:

About the accelerator all customers desire the capability to squeeze the maximum performance out of their IBM cognos analytic investment.

Cognos analytic is but a part of software and hardware environment.

A single bottleneck in either the software or hardware has a ripple effect for the entire system.

Software product compatibility reports provide up to information about the supported environments and minimum requirements for the product/data.

cognos analytic on premises 11.1x

cognos analytic on premises (11.1.7),(11.1.6),(11.1.5).....

Requirements by type	Requirements by platform	Supplementary information
•operating systems	•AIX	•supported and tested client drivers 11.1.7
•software(including application servers,data sources and web browsers)	•Linux •Mobile OS •Windows	
• Hardware		• Supported and tested client drivers 11.7.0

## Hardware requirements:

The hardware requirements depend on our IBM cognomen environment we may require additional resources,such as disk space.

Requirement RAM with recommended:4GB

Note:Although it is possible to run controller using the minimum specifications ,unless there are exceptional circumstances it is best to use at least the recommended specifications.

operating system specification in microsoft windows 2008 R2 Enterprise Edition, Ram with minimum 8GB, disk space with minimum 4GB, CPU cores of 4 web server is microsoft internet information services(IIS), Data base for IBM cognos business intelligence content store must be one of the following types are:

- oracle
- DB2
- microsoft SQL server
- TCP/IP connectivity to microsoft SQL server
- Debase.

Database for IBM cognos controller data must be one of the following types are:

- DB2
- oracle
- microsoft SQL server.

Oracle client database if are using oracle client as database, the following components are the minimum requirements:

- oracle network utilities
- oracle database utilities
- SQL\*plus

--- oracle JDBC/OCI interface

--- oracle windows interface

Note: we must install both the 32-bit and 64-bit on the server.

Others are microsoft excel is required to be installed on IBM cognos controller computers. Microsoft excel is required only to use the IBM cognos controller link for microsoft excel.

#### 4. EXPERIMENTAL INVESTIGATIONS

Analysis or the investigation made while working on the solution.

while working on the solution we investigated on the what is crop production, IBM cloud, IBM cognos analytics and how to build different visualizations and creating a dashboard and finally exporting it.

The key role on investigation is collection of dataset with its all data points of every state because our solution mainly need this so we worked on these aspects.

crop production: crop production is a common agricultural practice followed by worldwide farmers to grow and produce crops to use as food and fibre.

The practice includes all the feed sources that are required to maintain and produce crops.

Listed below are few practices used during crop production.

- preparation of soil.
- sowing of seeds.
- irrigation.

- Application of manure,pesticides,and fertilizers to the crops.
- protecting and harvesting crops.
- storage and preserving the produced crops.

#### THE FACTORS AFFECTING CROP PRODUCTION

--->Soil fertility.

--->Availability of water.

--->Diseases.

--->Pests.

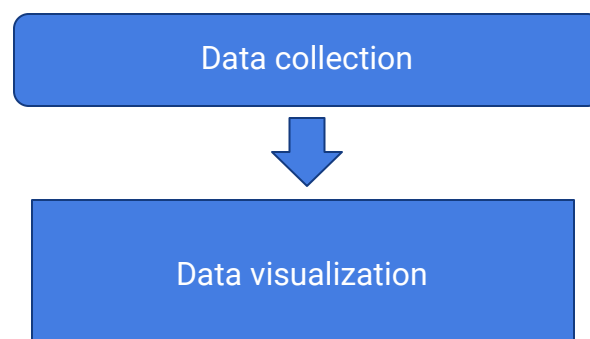
--->Climate.

• The major food crops are potato,rice,sorghum,soya-gun,maize and wheat are some important food crops.

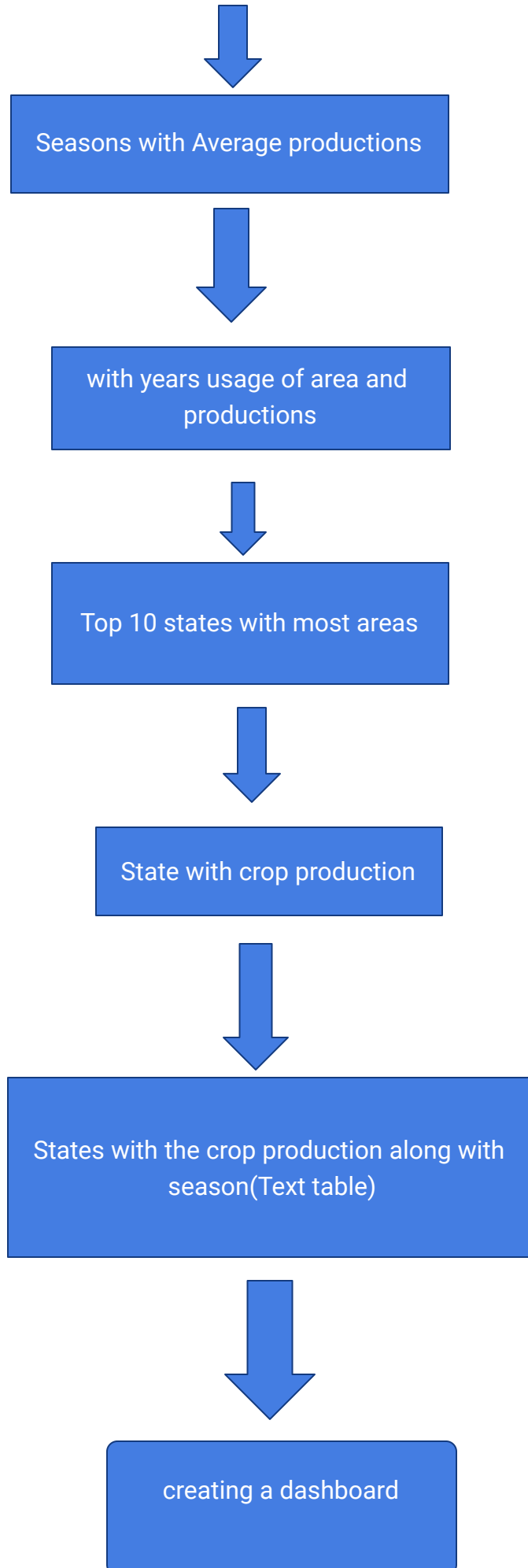
• The major food crops grown across the world --- Wheat and maize are the two major crops grown across the world.Rice and soya-gun are other crops grown across the world.

#### 5. FLOWCHART

Diagram showing the control flow of the solution.



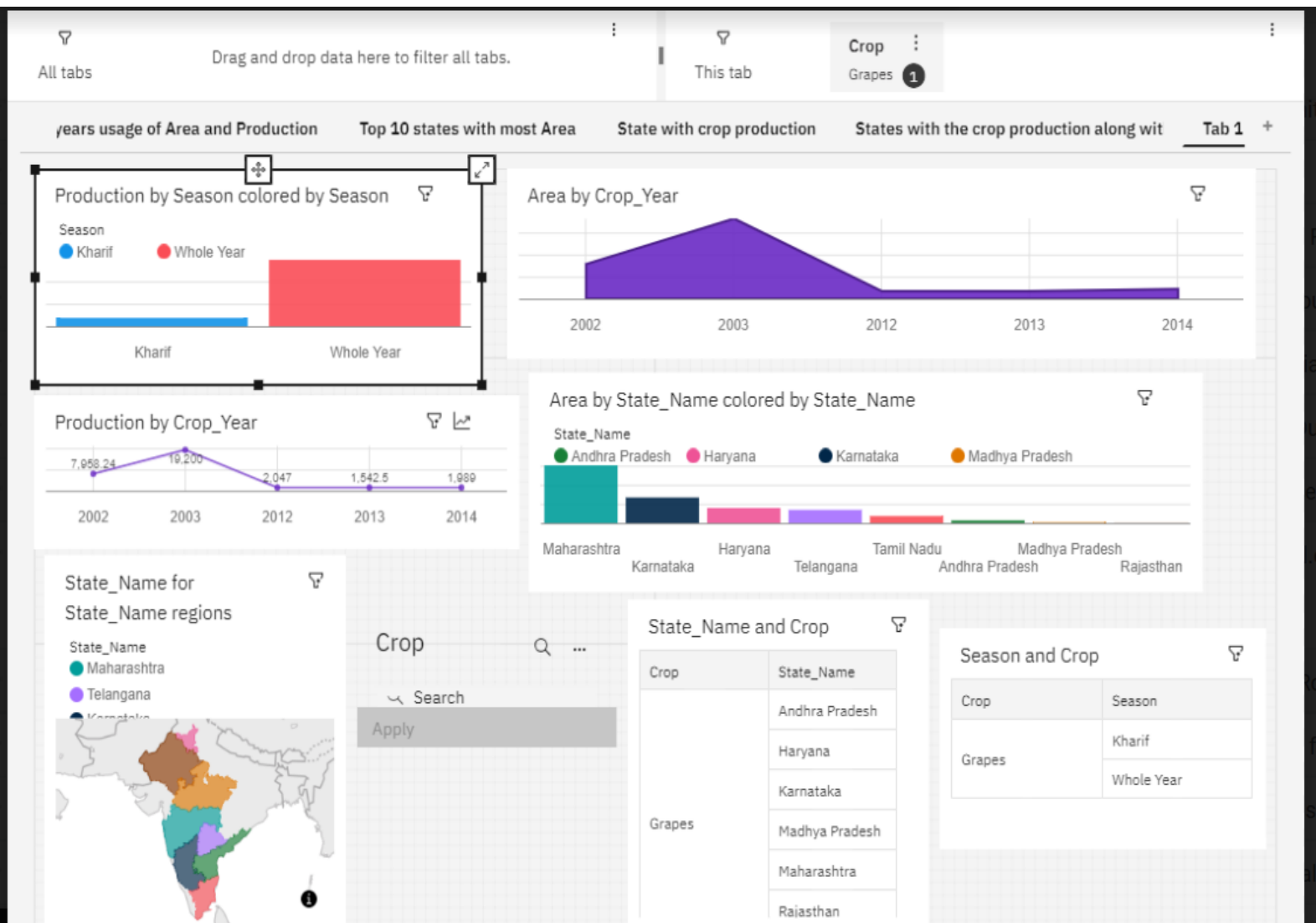




Exporting and  
conclusion

## 8. RESULT

Final findings (Output) of the project along with screen shots



## 7. ADVANTAGES AND DISADVANTAGES

List of the advantages and disadvantages of the proposed solution:

Advantages:

- In analytics, IBM Cognos Business Intelligence covers a phenomenal 97% of functions. This gives IBM's software a major advantage over other software packages, which provide an average 63% of features and functions for this module.
- lower costs --- reduces maintenance due to complete report coverage and a zero-footprint environment.
- faster results --- shortens reporting time due to seamless integration and adaptive authoring .
- improved decision making --- reports and dashboards present data in easily - understood formats.
- Ability to work with data using familiar business terms.
- Ability to use a variety of charts – cross tabs, bar or 3D bar, pie or doughnut, line, gauge, funnel, dot, density, scatter, waterfall, and so forth.

- Adaptive authoring automatically adjusts report layout when objects are added,moved or removed.
- complete connectivity regardless of environment.
- Ability to integrate seamlessly with the selling and fulfilment foundation, without the user having to login to the application again.
- Open architecture that leverage XML , SOAP and WSDL.

#### Disadvantages:

Along with benefits of IBM cognos analytics mentioned above, there are a few drawbacks to know about, as well. some of the disadvantages are--

- Wont work smoothly with large data sets having many parameters.
- Investment in cognos R and D by IBM having many parameters.
- Total cost of ownership (TCO) is more significant than other tools.
- Cross-browser compatibility is often problematic.

## 8. APPLICATIONS

The areas where this solution can be applied:

- Complex SQL.
- Normalized databases are typically tuned for simple queries.
- Aggregate view of data versus transactional view.
- Query perfor.

## 9. CONCLUSION

Conclusion summarizing the entire work and findings:

By the end of the project we will --

- Know the fundamental concepts and can work on IBM cognos Analytics.
- Gain a broad understanding of plotting different graphs.
- Able to create meaningful dashboards.
- From this entire findings we know fundamental concepts and can work on IBM cog no Analytics.
- Learned to build dashboards with cognos analytics.
- learned to create graphs on IBM cognos Analytics.
- we will understand the reporting interface.
- Implementing cross tabs and SQL queries.

From the crop production we entries the value of commitment, stay grounded and humble to our nature,gratitude goes a long way , great things take time, working hard and having fun can happen at the same time.

## 10. FUTURE SCOPE

Enhancements that can be made in the future:

- » Cognos is one of the leading BI suites in the market for Meta data modelling and Reporting so learning this will be definitely helpful in your career growth in BI domain.
- » Great response..... IBM cognos TM1 form 10 has now been around for a decent time and has officially experienced a few minor and real updates.
- » IBM cognos dashboard Embedded is an API-based solution that lets developers easily add end to end data visualization capabilities to their applications.
- » IBM cognos analytics leads to better decisions and improves company performance and profitability.
- » we can scope the better job in future with easy experience.

Total 709 companies are most often in computer software industry.

Rightly so, a good majority of them focus on the strategic aspects of dashboard creation such as understanding our audience and purpose first, and choosing the best charts to display our data visually for maximum readability and insights.

- » Learning cognos is easy but , no doubts about that . But you need to come to desk with a focused mindset whose objective is to assist in deriving solutions to business problems , and being in a functional role , design solutions.

## 11. BIBILOGRAPHY

References of previous works or websites visited/books referred for analysis about the project , solution previous findings etc... :

- <https://knoema.com/insights?tag=crop%20dashboard>
- <https://agrionline.nic.in/dash/dash.html>

