ISSN- 2394-5125 VOL 07, ISSUE 02, 2020

Control of Dominant meta using software uitility in big data

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Abstrct:
Analyze, Process and Extract the information from an extremely complex and large data sets which the Traditional Data Processing Software could never deal with.Big data is a term that describes the large volume of data – both structured and unstructured that inundates a business on a day-to-day basis. But it's not the amount of data that's important. It's what organizations do with the data that matters. Big data can be analysed for insights that lead to better decisions and strategic business moves. The use of Big Data is becoming common these days by the companies to outperform their peers. In most industries, existing competitors and new entrants alike will use the strategies resulting from the analysed data to compete, innovate and capture value. Big Data helps the organization

1. INTRODUCTION

The scope of the project includes the storing up of massive amount of data in a secure and reliable way. Though the data is very huge amount storing and maintaining is a big concern in the technology. And the stored data may be prone to security issues and data integrity issues as well. Data volumes will continue to increase and migrate to the cloud. The majority of big data experts agree that the amount of generated data will be growing exponentially in the future. The technological revolution in the electric power system sector is producing large volumes of data with pertinent impact in the business and functional processes of system operators, generation companies, and grid users.

Big data techniques can be applied to state estimation, forecasting, and control problems, as well as to support the participation of market agents in the electricity market. This chapter presents a revision of the application of data mining techniques to these problems. Trends like feature extraction/reduction and distributed learning are identified and discussed. The knowledge extracted ProSystem power system and market data has a significant impact in key performance indicators, like operational efficiency. Furthermore,

business models related to big data processing and mining are emerging and boosting new energy services.The system is economically feasible because the cost involved in purchasing the hardware and the software is within approachable. Working with this system need not require a highly qualified professional. The operating-environment costs are marginal. The less time involved also helps in its economic feasibility to create new growth opportunities and entirely new categories of companies that can combine and analyse industry data. These companies have ample information about t/he products and services, buyers and suppliers, consumer preferences that can be captured and analysed

2. MATERIALS AND METHDS

The System Development Lifecycle framework is designed to outline a complete development and implementation process suitable for developing complex applications. SDLC is

ISSN- 2394-5125 VOL 07, ISSUE 02, 2020

a process followed for a software project, within a software organization. It consists of a detailed plan describing how to develop, maintain, replace and alter or enhance specific software. The life cycle defines a

methodology for improving the quality of software and the overall development process.
a.) Business – legislation regulatory requirements, policy, SOP's, guidelines etc.
b.) Process – how the business is implemented
c.) Data – the core business data elements collected for the business
d.) Application – the gate to the business collecting
e.) Infrastructure- the servers, network, workstations, etc

A. SDLC Phases

a controller design methodology is developed for large-scale cyber-physical systems with agents having various dynamics. Especially, we propose a representative model of much lower order than the scale of the original CPS. This model facilitates designing controllers for large-scale CPS. We derive necessary and sufficient conditions such that controllers designed for the proposed representative model stabilize the original CPS with given performance. The representative model is in the form of a nominal model with a variation of the agent models. This result shows that bad behavior of a few agents does not affect the stability or performance of the original system very

much. Finally, the effectiveness of the proposed method is illustrated by simulation for a power grid. The demerits are

- Lack of centralized management for storing the data.
- Complex is designing a scalable storage area.
- Difficult in maintaining the large amount of increased overhead.
- Data availability is reduced in this existing system

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Plant operations and maintenance can be greatly improved by, Because of long operating lifetimes, power generation plant can lag in the adoption of modern data analytic and other solutions to improve operations and maintenance. Many facilities still have what they started with in terms of by using big data technology .we upload each and every data the data's can be monitored there will be any flaws in data's our technology find the errors in reading and update to the administrator , the error can be shows in window application. The advantages are

- Handles the big data in a secure and reliable way.
- Monitoring and analyzing in huge data in easier way.
- Data can be stored and monitored highly precision.
- Using big data increases your efficiency.
- Using big data improves your pricing.
- Since the advantages of Big Data are numerous
- Big data empower your workforce in ways that add value to your business.

B. Unit Testing : Unit testing focuses verification effort on the smallest unit of software design, the module. The unit testing we have is white box oriented and some modules the steps are conducted in parallel.

C. White box testing

This type of testing ensures that

a.) All independent paths have been exercised at least once

b.) All logical decisions have been exercised on their true and false sides

c.) All loops are executed at their boundaries and within their operational bounds

d.) All internal data structures have been exercised to assure their validity. To follow the concept of white box testing we have tested each form .We have created independently to verify that Data flow is correct, All conditions are exercised to check their validity, All loops are executed on their boundaries.

D. Basic path testing: The established technique of flow graph with Cyclamate complexity was used to derive test cases for all the functions. The main steps in deriving test cases were:

Use the design of the code and draw correspondent flow graphs.

Determine the Cyclamate complexity of the resultant flow graph, using formula:

V (G) =E-N+2 or

V (G) =P+1 or

V (G) =Number of Regions

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Where V (G) is Cyclamate complexity,

E is the number of edges,
N is the number of flow graph nodes,
P is the number of predicate nodes.
Determine the basis of set of linearly independent paths.

E. Conditional testing

In this part of the testing each of the conditions were tested to both true and false aspects. And all the resulting paths were tested. So that each path that may be generated on particular condition is traced to uncover any possible errors.

F. Data flow testing

This type of testing selects the path of the program, according to the location of the definition and use of variables. This kind of testing was used only when some local variable were declared. The definition-use chain method was used in this type of testing. These were particularly useful in nested statements.

G .Loop Testing

In this type of testing all the loops are tested to all the limits possible. The following exercise was adopted for all loops:

a.) All the loops were tested at their limits, just above them and just below them.
b.) All the loops were skipped at least once.
c.) For nested loop test the innermost loop first and then work outwards.
d.) For concatenated loops the values of dependent loops were set with the help of a connected loop.

3 RESULT AND DISCUSSION

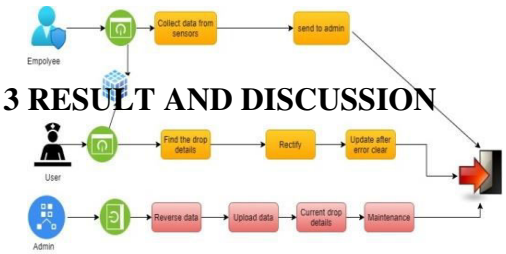

Fig. 3.1 System Architecture

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i.) System security

Security system can be divided into four related issues: The protection of computer based resources that includes

hardware, software, data, procedures and people against unauthorized use or natural Disaster is known as System Security.

i.) Security
ii.) Integrity
iii.) Privacy
iv.) Confidentiality

ii.) System security refers to the technical innovations and procedures applied to the hardware and operation systems to protect against deliberate or accidental damage from a defined threat.

iii.) System integrity refers to the power functioning of hardware and programs, appropriate physical security and safety against external threats such as eavesdropping and wiretapping

iv.) Privacy defines the rights of the user or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair or excessive dissemination of information about it.

v.) Confidentiality is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection.

vi.) Security in software System security refers to various validations on data in the form of checks and controls to avoid the system from failing. It is always important to ensure that only valid data is entered and only valid operations are performed on the system. The system employs two types of checks and controls:

vii.) Client side validation Various client side validations are used to ensure on the client side that only valid data is entered. Client side validation saves server time and load to handle invalid data. Some checks are imposed:

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i.)JavaScript in used to ensure those required fields are filled with suitable data only. Maximum lengths of the fields of the forms are appropriately defined.

ii.)Forms cannot be submitted without filling up the mandatory data so that manual mistakes of submitting empty fields that are mandatory can be sorted out at the client side to save the server time and load.

iii.)Tab-indexes are set according to the need and taking into account the ease of use while working with the system.

viii.) Server side validation Some checks cannot be applied on the client side. Server side checks are necessary to save the system from failing and intimating the user that some invalid operation has been performed or the performed operation is restricted. Some of the server side checks imposed is:

a.) A server side constraint has been imposed to check for the validity of primary key and foreign key. A primary key value cannot be duplicated. Any attempt to duplicate the primary value results in a message intimating the user about those values through the forms using foreign key can be updated only of the existing foreign key values.

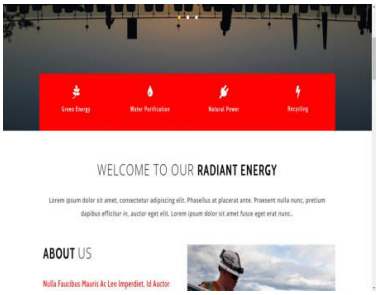

Fig. 3.2. Output Screenshots

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4. CONCLUSION

A cloud-backed file system for storing and sharing big data. Its design relies on two important principles: files metadata and data are stored in cyper physical system, without requiring trust on any of them individually, and the system is completely data centric. Our results we monitoring datas any drop from circuits the cyper physical system find the current losses in step-up and step-down transformer and they show output in graph views in ups and down.

The future enhancement includes the data integrity between the multiple cloud

providers and the efficient algorithm for the management i.e. storing and processing of those data.Another enhancement is the use of Byzantine-resilient data centric algorithms for implementing storage and coordination. There are some works that propose the use of this kind of algorithms for implementing dependable systems