

ABSTRACT

The Cloud Data Center it's not a Data Center or Server room, Cloud is a Third-party services provider that provides servers for rent via the Internet it's called a cloud. The data centre it's a typical server room, anyone can deploy as per requirement. There are numerous factors to consider when deciding on the knowledge of a data centre. Data centre design is the process of improvement of modelling and planning a data centre's Information Technology properties architectural arrangement and perfect arrangement. It allows the logical idea of a data centre preceding to increase or employment in an organization or IT background.

I was identified at an early stage in the Small and Medium industry to use on-premises server rooms or also use a Cloud Data centre. In both scenarios Small and medium enterprise businesses can't afford it. In this research, I have comparative services displayed in some data centre. Server room and Data centre working functionality same as like require power, cooling, cabling, and technical maintenance and management. Additionally, mission-critical applications require 24x7x365 support. I compare cloud data center and local server room costs estimated in this research the Small and MSME are using the data center facelift at a cost-effective rate.

Various academic and scientific research work has been done around the green energy data center, challenges. Herewith we research about re-thinking data center design then it is required for data center services, hardware and maintenance cost, and energy cost. Data center also consumes more energy to air condition. The major research work is on green energy and energy-sufficient data center design and some research work is on network architects in the data center. Every data center service is required today all the digitization is online.

Rajkot Industrial area has more than a thousand Industrial units. Out of thousands, in metoda GIDC Hundreds of industrial units have their data centre installed. These industries are daily surviving and dependent on data Security, Hardware Issues, Networking Issues, Data Backup, and Cyber-attack, in time solution, depend on third-party services and support. Many industries units are medium or small, it does not afford to own a data centre, and they simply use ERP for normal functions & routine tasks. His not migrated cloud-based services because of server cost, and Internet cost, and due to that, they cannot get better performance. They can't trust any cloud-based services and also, he requires one employee for a cloud solution or third-party support. Many industries use local ERP only for uses SAP or International standard Production Software. The local industry has many other thins regarding data centre such as Data Security issues, Server Host and Storage Costs, Local ISP Bandwidth costs, and Dependency on Bandwidth. As GLIA METODA no competition increases between data centre colocation providers, so

not require more value-added services and facilities. The Centre of Excellence in These might include conference rooms, offices, and access to office equipment.

Our purpose is to design a datacentre for small industries or users to the nearest geographic location and provide a connection Fibber Optical Cable or Wireless Connection network architecture. All units' direct connection to the data center same as a local server. Data centre design and architecture to near industrial areas and provide services to Small and medium industries. Proposed the data centre to Industrial area is strong bonding and trust to users his data security and stable connection to the server. GLIA Industrial Units requirements to On-Premise Data centre or Local Data centre with Security and Cost-effective as well as technical support. The town Data Centre site is nearest to an Industries Unit or organization. The users who wish to visit the centre or supervise the on-site staff from a Data centre are required. The data centre location in nears GIDC is Security is trusted.

Proposed the planning of Town Data Centre in GLIA Metoda. Server and Rack sizing, PGVCL Power supply grids, EPBX and telecommunications, Internet Leased Line networking services, Local transportation, and technical emergency support and services required can affect costs, risk, security, and other features that need to be data centre deployment. The Town Data Center has a cost-efficient substantially lower lease rate compared to the market. Reliable Service Level Agreement 99.99% availability of the overall system. Industry-leading SLAs and Hyper-scale servers offer upgrades within the same facility. Flexible commercial approach.

Our basic survey of the need of industries for data centre requirements is very difficult to convey without any demo or practical scenario to industry users are agree with the town data centre model. The limitation of the study is we propose the model of the Town Data Centre in the logical scenario in practice we need financial help or any IT Company are agree to work as a pilot project, its design to deploy the nearest Industrial area and provide data centre connection throw Optical fibber cable or wireless connection.

Rajkot City are educated employees with computer talent and expertise. With the influx of technology jobs appearing in Rajkot city smaller markets have seen an increase in the number of technical experts are increase. The main advantage of this research is our proposed model for the data centre is designed as per the requirement of the town and a town using zero-latency connectivity and cost-effective data centre felicity with nearest to geography location. Town data centres are located closer to the end-user than the public cloud.

Herewith using this research Machine learning hybrid recommendation model using data centre services recommend to users. This model uses Item Based, Supervised, Unsupervised, Hybrid recommendation algorithms. Random forest Supervised ML Algorithms in this all are used fully to predict and statistical data evaluation to our research work.