

Analyzing Data For Cultivation By Using Jupyter Notebook

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Abstract:-

Data science has established as an vital scientific field and driving agent in research in multiple disciplines like intelligence system, data security, transformation of information from one working area to another in various domains like science, engineering, the public sector, business, social science and lifestyle. In this research paper , data have been collected related to crops from different regions and farming tools as well; in order to facilitate farmers related to seeds and farming tools so that they can avail the benefits of their necessities, in order to reduce therework.It also concerned with related scientific challenges, wide range of data capturing, optimization and visualization of data.

Keyword:- MATLAB, BootStrap, Jupyter, MySQL

1. Introduction

This Will Help Farmers to Get the necessary tool at low price if they are not able to buy the tool. And it'll also give freedom so that they can first try the product and then buy it so that they can get the specific idea about the product This will also help them in the crop cultivation if they need as it is having a separate tool to help the farmer in the best possible way.

We all know that the farmers are the backbone of any country and when we talk about India. we know that the rural area in the India mainly depend on the farming. These are the following technologies which I have used such as PHP, HTML, CSS, Boot Strap, MySQL, Java Script, Python, MATLAB, Jupyter Notebook and Excel. This work is all about making agriculture is easy process , in consideration with this we know that Agriculture is most important sector in India. 47% of India's GDP is contributed by Agriculture and most importantly Most of India's workforce is working in this sector. Although It is important sector, People working in this sector has very low GDP per capita. Most people are poor and uneducated. Many Government has tried to change this but ground situation is still the same. Modi Government has made commitment to double the income of farmers by 2022 and farmer don't have anyHave anything to work with so here in this project we are going to help farmers in a way that they get all the things on the same place For example if they want seed, the knowledge about pesticides and all other things all thing will be provided in it. The aim of this paper is to help farmers to get all the things in the cheaper prices for example the tools used in farming the pesticides used in farming and even seeds the website aims to provide the quick simple and cost effective method and tip for the same the main idea behind the decision to make this website it's to avail the farmers and give the opportunity to get some profit by saving some money. Proposed work may help farmers in such a way that to make it as cost effective process, the farmer from any place can use the experience of the people who are in this field from last some decades, the farmers in the villages don't have enough information or tools to increase their productivity but with the help of this website they can do this very easily and despite of people from farming background this is design to gain knowledge about farming techniques. Functional requirement for the proposed application are sign in sign up page, rent in buy pages, knowledge about farming and improved farming techniques. Certain

input required for application is the need of internet, user to operate, instruments for sale and videos to trained the farmers in certain aspects. This application will be used by anyone either children ,old aged , Adult ,teenagers woman or simply can have any profession

2. Existing System

There is no other application available for this particular however they do exist of you application or website running for the same cost those application built in such that farmer cannot take all the information from a single website and this website it's going to get rid of all those drawbacks

There is no other application available for this particular however there are some websites who works for same things but they are the websites and they are not updated and even information over there is like a half decade old. even if farmer go to the website the interface of that website is not that much user friendly so that a farmer or a low or under educated person can get to know the things which they want from that website and even if they understand that then also they have to go to at least 5 websites to gain the knowledge websites providing This website will help the farmer in such a way way that even if the farmer only knows a little bit about using the mobile Phone then also he can go through all the applications which are provided by the website and this is the main part where all the websites are liking behind and we want to fill that gap Which is in between the farmer and the new technologies we want to join the farmer with new technologies so that they can increase the productivity and gets profit as you all know that India's 42% GDP came from farming and the farmer's are in the bad condition so our main focus is to Change the old farming techniques with the new ones.

3. Present System

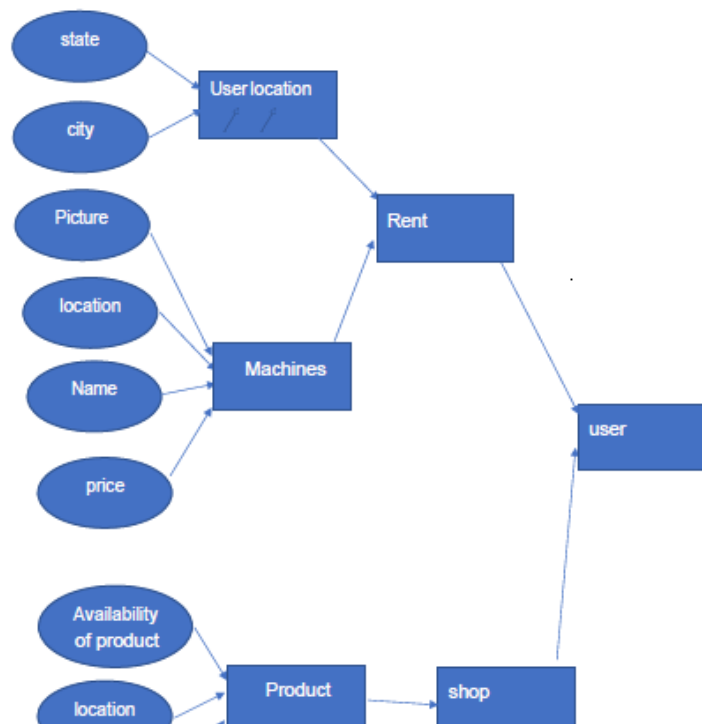


Fig 1:- Shows the Present System

In fig 1 shows, the present system and in this I am showing the different facilities with which farmer can avail all these benefits. This system which we have developed is completely unique system and there are some areas of improvement in this website and that are also our future prospective for this website because if you want to make this website a live website then you going to need a used center or you going to take it on rent it because data gathered from this website will be huge and will be needing a large amount of storage age to store data and also this website will help all the person who belongs to farming or not as it will also provide them the data and the person who are willing to come into this field they can also get the necessary knowledge and even in the future it website will help the person if they want to enter in the field of the farming which also include the scientific farming.

Software Requirements:-

Technology to be used

Python

1. Python is used for analysis and visualization of data
2. Python have the library matplotlib in which we have done the visualization and cleaning of data so that we can show the plots are the outputs and get to understand a lot of things from that output
3. Python also uses Jupiter notebook which is used in the analysis

General description

A website is a collection of related web pages including multimedia content typically identified with a common name and published on at least one web server for example Amazon, Google ,Flipkartetc today roughly 380 new website are created every minute across the world a website may be accessible we are public Internet Protocol network such as the best Internet or private local area network by reference a uniform resource locator that identifies the site website can have many function and can be used in various function a website can be a personal website or a corporate website for company or government website and organization website etc

Hardware requirement

1. Intel Core I 3 or higher processor with 2.0GHz speed
2. Ram minimum to 2 gb
3. Hard disk is minimum 20 GB

Software requirement

1. Python
2. Anaconda
3. Notepad /notepad ++

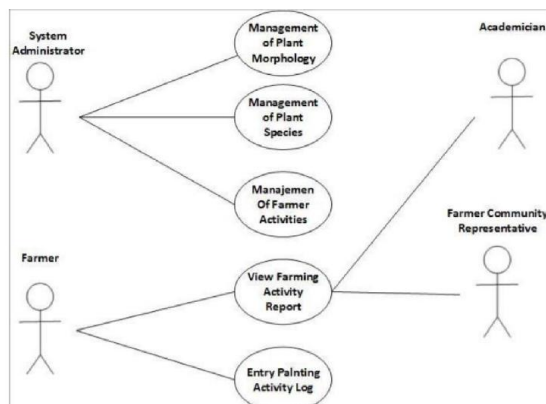


Fig 2:- Depicts the design of present system

4. Results

Fig 3 shows the Year wise crop production analyses

k.sum()[-9:-2].plot(figsize=(20,8), kind='bar');

plt.title('Year wise production different agricultural products') plt.ylabel('Production in Quintal')

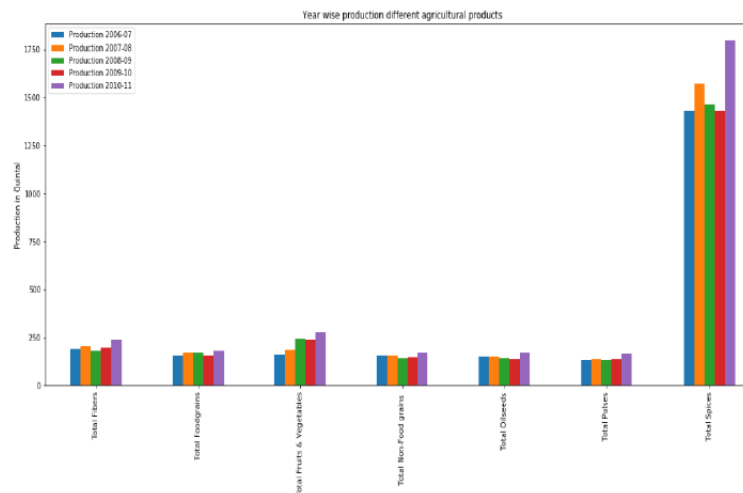


Fig 3:- Depicts region wise crop analysis report

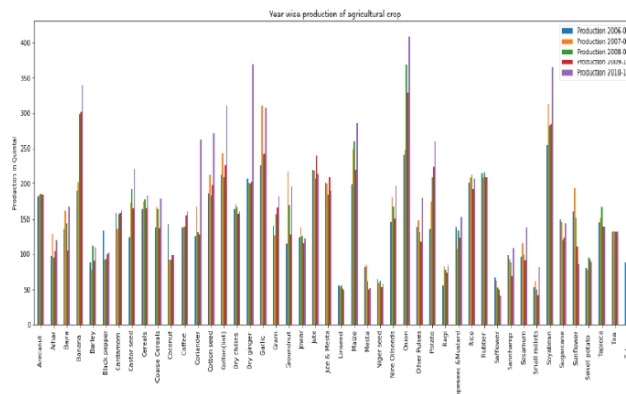


Fig 4:- Depicts yearly Production of crop report

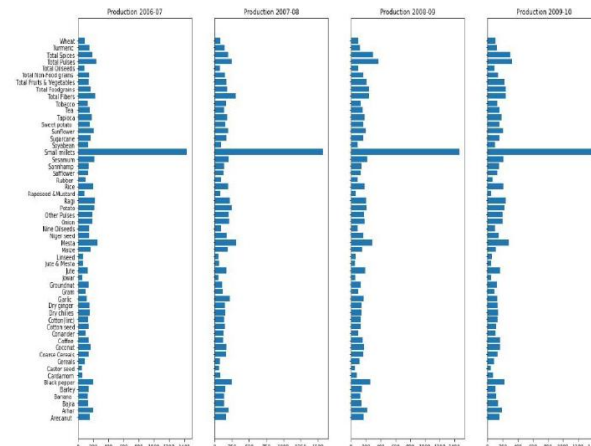


Fig 5:- Depicts previous 4 year crop data by considering there production

5. Conclusion

In this research paper, I have presented the model that how it will help farmers to make their work easy by taking tools on rent and they can use all the farming tools whenever they required. Generally this model is proposed for farmers specifically because they can update their self by recent technologies which will make farming easy and complexity will be reduced. I have already analyzed data for production and crops in comparison with previous 4 years as depicted in results.

6. Reference

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