

PROJECT DESIGN PHASE - I

PROPOSED SOLUTION

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| Date | 21 September 2022 |
| Team ID | PNT2022TMID54027 |
| Project Name | Estimate the crop yield using data analytics |
| Maximum Marks | 2 Marks |

| S.NO. | PARAMETER | DESCRIPTION |
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| 1. | Problem Statement | <ul style="list-style-type: none">• Crop production is one of the most important source of India. Farmers use the traditional method of agriculture which really takes a lot of time.• An efficient solution has come up through which we can directly predict the future crop yield and maximize the productivity of the crops.• This can be done by using the Data Analytics which provides us with the all the necessary information such as what crops can be grown, at which season it gives us the better yield and the utilization of the water, pesticides and fertilizers at the right time for the crops to get the maximum yield.• Based on the Data Analytics the farmer can take better decisions and prevent their crops from losses. |
| 2. | Idea / Solution description | <ul style="list-style-type: none">• The collected data should be explored in an efficient manner to find insights for the better decision.• The factors that will affect the crop yield should be found and the factors that are related to the crop yield should also be found.• Using this information an interactive dashboard should be created with different charts and graphs that comes out with an accurate solution to prevent the losses and maximize the production of the crops.• This can also be compared with the past historical data to get a better knowledge. |
| 3. | Novelty / Uniqueness | <ul style="list-style-type: none">• Using data analytics for the crop production consumes a less amount of time as compared to the traditional method of farming.• It also visualizes us with the future prediction of crops and it increases the crop productivity.• It not only increases the crop productivity but it also provides us a healthy crop. |

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| 4. | Social Impact / Customer Satisfaction | <ul style="list-style-type: none"> • <i>This precision agriculture saves a lot of time than the traditional method.</i> • <i>The future prediction of crops are visualized so that the better decisions can be taken.</i> • <i>This can be used by anyone such as farmers or individuals who needs a healthy crop and maximum crop yield.</i> • <i>It also prevents the crops from heavy losses.</i> |
| 5. | Business Model | <ul style="list-style-type: none"> • <i>A maximum amount of crop production will be the result of this model and the farmers can get a good revenue based on the production.</i> • <i>This gives the good experience to the famers and they can increase their partnerships with others to get a good profit.</i> • <i>This can also be implemented in an application to generate more revenue and this should give an profit for each and every process they make use it of.</i> |
| 6. | Scalability of the Solution | <ul style="list-style-type: none"> • <i>With the past visual reports based on the area, climate, soil and water conditions we can also increase the scalability.</i> • <i>The data need to be explored accurately and it can also be compared with the past historical data for the better solution.</i> • <i>The scalability can be increased by increasing the production area, good soil conditions and climatic conditions.</i> |