**Project Design Phase-I**

**Proposed Solution Template**

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| Team ID | PNT2022TMID18532 |
| Project Name | Estimate The Crop Yield Using Data Analytics |

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| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement (Problem to be solved) | India is one of the top countries for agricultural output, making crop production one of the most significant sources of revenue in the country. Inputs like a seed, water, pesticides, and fertilizers may be used precisely and at the proper moment for the crop to maximize production, quality, and yields due to digital farming. To choose the crops that will be grown in a field, the majority of farmers follow conventional agricultural practices. Farmers may make better decisions for healthy crop production based on statistics. |
| 2. | Idea / Solution description | 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 analyzing some important visualization, and creating a dashboard and by going through these we will get most of the insights into Crop production in India. |
| 3. | Novelty / Uniqueness | Agriculture is important for human survival because it serves basic needs. Due to variations in climatic conditions, there exist bottlenecks for increasing crop production in India. It has become a challenging task to achieve desired targets in Agri based crop yield. To choose the crops that will be grown in a field, the majority of farmers follow conventional agricultural practices. Farmers may make better decisions for healthy crop production based on statistics. |

**Proposed Solution Template:**

The project team shall fill in the following information in the proposed solution template.

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|  |  | Agricultural statistics are useful for planning, monitoring, and evaluation purposes. Therefore, we use the IBM Cognos BI tool to provide useful insights from the data regarding the agriculture of India and perform analytics and provide necessary statistics to increase crop production. |
| 4. | Social Impact / Customer Satisfaction | Crop yield prediction is one of the important factors in agriculture practices. Farmers need information regarding crop yield before sowing seeds in their fields to achieve enhanced crop yield. The use of technology in agriculture has increased in recent years and data analytics is one such trend. Performing analytics in given data and providing useful insights such as average crop production season-wise will help farmers to identify the season with high and least crop production with help of insight, and we can also get to know the area that's been used yearly for crop production, by producing such insights it will create a good impact in the efficiency of crop production in agriculture. |
| 5. | Business Model (Revenue Model) | Supply chain operation between farmers and Entrepreneurs. Helps the companies in project scheduling. Farmers can achieve enhanced crop yield by predicting the yield before sowing the seeds. farmers can overcome the challenging tasks involved in crop production. The estimation of the production of crop help the companies in planning supply chain decision |
| 6. | Scalability of the Solution | In terms of the scalability of the project, we can increase crop yield production by performing analytics and interpreting useful insights from given data. Insights such as estimating the season-wise average crop production, and estimating the yearly are used in crop production, providing such insights can help farmers taking better decisions I’m choosing suitable crops according to season and we can get to know the state in India with the least crop production and can focus on those states to increase their crop production. Therefore, this solution can significantly  increase the scalability of crop production in India |