Project Title: Exploratory Analysis of RainFall Data in India for Agriculture, Project Design Phase - I : Problem Solution Fit, Team ID: PNT2022TMID51361

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| D  e  f  i  n  e  C  S  ,  f  i  t  i  n  t  o  C  C | | |  | | 1. CUSTOMER SEGMENTS CS | |  | | 6. CUSTOMER CONSTRAINTS CC |  | | 5. AVAILABLE SOLUTIONS AS | | E  x  p  l  o  r  e  A  S  ,  d  i  f  f  e  r  e  n  t  i  a  t  e | |
|     | | Mainly Farmers  Employees/Workers associated with Agricultural activities Departments of the government or news organisations  seeking agricultural rainfall forecasts | |          | | To estimate the duration and volume of rainfall beforehand and take decisions accordingly To get a prediction with 100% accuracy  Cost factors for applications with high prediction accuracy and value  Limited time to make use of digital devices to get the prediction information  Unstable network connection |    | | News on weather forecasting from various communication media like radio, news channels, etc.  Announcements from the concerned authorities and notifications from connections [friends and families] on upcoming rainfalls affecting the agriculture | |
| F  o  c  u  s  o  n  J  &  P  ,  t  a  p  i  n  t  o  B  E  ,  u  n  d  e  r  s  t  a  n  d  R  C | |  | | | 2. JOBS-TO-BE-DONE / PROBLEMS J&P | |  | | 9. PROBLEM ROOT CAUSE RC |  | | 7. BEHAVIOUR BE | | F  o  c  u  s  o  n  J  &  P  ,  t  a  p  i  n  t  o  B  E  ,  u  n  d  e  r  s  t  a  n  d  R  C | |
|       | | | Get proper analysis from previous data  Achieve correct and accurate predictions  Sudden change in weather and immediate rainfall or showers  Damage to crops due to heavy rainfall | |     | | Irregular rainfall in various regions of India  Drastic variability in climate change  Biodiversity loss |    | | Take suggestions from concerned authorities,agricultural scientists, and other influencers to make decisions Take decisions as per previous experiences and selfanalysis | |
| I  d  e  n  t  i  f  y  S  t  r  o  n  g  T  R  &  E  M | | |  | | 3. TRIGGERS TR | | 10. OUR SOLUTION SL | | | 8. CHANNELS of BEHAVIOUR CH | | I  d  e  n  t  i  f  y  S  t  r  o  n  g  T  R  &  E  M | |
|      | | Current losses and debts  Yearly crop damage due to heavy rainfall  Evolving market competition and change in demandsupply | | * Region [district or sub-division] based analysis of previous years’ rainfall data to get the seasonal patterns with respect to the production of different sorts of crops * Building a low-cost or free ML-based application   [consuming low bandwidth] to predict the rainfall of places in India with a high concentration of agricultural activities while taking care of the trends and analysis done already | | | 8.1 ONLINE   * Receive early notifications on their digital devices, especially mobiles or smartphones, through SMS or app alerts   8.2 OFFLINE   * Community forums, meeting where farmers and other people can share ideas, discuss and decide on crop activities | |
|  | | 4. EMOTIONS: BEFORE / AFTER EM | |
|    | | Before : Paying debts, incurring losses, low crop production  After : Increase in crop production, making effective decisions, experiencing growth and profits | |