

Literature Review on AI based Food Demand Forecasting Techniques.

| S. no | Forecasting Techniques | Author and Years | Specific Model used | Advantages | Disadvantages |
|-------|---|-------------------------|--|---|---|
| 1. | Regression[19, 20] | Schorfheide (2010) | Linear regression and multiple linear regression. | very useful in non-real time forecasting. Functional relationship between previous, forecast load and other factors such as weather, time of the day. | Not accurate for real time load and unable to handle non linear load consumption. Adding parameters make it unstable. |
| 2. | Time series Analysis[20-22] | James D. Hamilton(1994) | Auto regressive moving average, auto regressive intergrated moving average, Deterministic decomposition. | They possess abilities to accommodate seasonal component effects. | They suffer numerical instability. |
| 3. | Artificial Neural Network[23,24] | Frank Rosenblatt (1958) | Multilayer perceptrons, back propagation algorithm, steepest descent error back propagation. | Ability to handle non linear relationships in load consumption by adjusting its weight during training process. | Large amount of data are needed to train the model and complexity in the training of such data. |
| 4. | Fuzzy interface system [19,25] | Rush and Roy (2001) | Defuzzification method using center of area, middle of maxima, last of maxima and center of gravity. | Faster and more accurate in performance including simplicity in rule formation. | Selection of membership function to form its rule is based on trial and error. |

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| 5. | Support vector machine [15,26] | Vladimir N. Vapnik and Alexey Ya.Chervonenkis (1963) | Support vector regression using incremental learning algorithm support vector regression. | It enhances higher feature space dimensionality by using insensitive loss for linear regression computation and reduction in model complexity. | Choosing of suitable kernel and difficulties in its interpretation are major concerns. |
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