**DEPARTMENT OF ELECTRONICS AND COMMUNICATION**

**ENGINEERING**

**IBM – LITERATURE SURVEY**

**PROJECT TITLE**

**AI- POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTS**

(2022-2023)



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**LITERATURE SURVEY**

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| **S.**  **NO** | **TITLE OF THE PROJECT** | **ADVANTAGE** | **DISADVANTAGE** | **TECHNOLOGY USED** |
| **1** | AI in nutrition science research | Using AI in Nutrition Science the food composition studied easily | The main problem in AI nutrients is range of research area to be considered | Artificial intelligence, Machine learning, deep learning |
| **2** | An AI driven approach for smart refrigerator to enhance family diet and sustainability | It can reduce the power consumption of household appliances | The unreliability of the information was extremely high | Artificial Intelligence, Machine Learning, Cloud Computing |
| **3** | Nutritional update for physicians | Weight loss is a growing factor these days and people are searching for free apps than the premium apps. | user are preferring only free apps in all mobiles platforms. | Artificial Intelligence, Machine Learning, Blackberry, IOS Apple. |
| **4** | AI food image recognition via deep learning for smart food logging | It also identifies 756 different types of food. | To update the model to incorporate new classes of food to as they become popular is a biggest challenging factor. | Artificial Intelligence, Image Processing, Deep learning. |
| **5** | Danes for meal management and nutrition counselling | As the expert system software is used it advices people about their health and it acts as human expert | As it provides diet plans and meal plans it does not monitor the activity of humans | Artificial Intelligence expert system |
| **6** | AI based workout assistant and fitness guide | It is not only used by individuals at home but by increasing the scope can be used in gyms as smart trainer thus reducing the human interrention | It cannot capture more number of people in a single frame in the real time system | Artificial Intelligence, CNN (Convolutional Neutral Network), API (Application Programming Interface) |
| **7** | AI health and healthcare | AI Makes healthcare more accessible  Provides Real time data | Needs Human Surveillance  Personal involvement is lacking | Automating time consuming tasks can free up clinicians |
| **8** | Diet, exercise and smart phones a content analysis of mobile health application for weight loss | Whether app recommends daily diet and caloric consumption**.** | Using the camera is that sometimes images require more time to process than text message | Artificial Intelligence, Machine Learning, Blackberry, IOS Apple. |
| **9** | International society of sports nutrition position stand | Endurance exercise performance  Resistance exercise performance | Only track the protein level.  It cannot monitor other needs like nutrients & water level. | Artificial Intelligence,  Deep learning. |
| **10** | Precision nutrients management using artificial intelligence based on digital data collection framework | The nutrient intake was analyses by entering dictary recall data. | Micro-nutrient and the reference works should be include. | Artificial Intelligence |