

IDEATION PHASE

LITERATURE SURVEY

Date	21 October 2022
Team ID	PNT2022TMID41375
Project Name	AI-Powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	2 Marks

1.	Paper Title	<ul style="list-style-type: none">Artificial Intelligence is one of the emerging technologies which try to simulate human reasoning in AI systems. John McCarthy invented the term Artificial Intelligence in the year 1950. He said, 'Every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it.
	Problem Definition	<ul style="list-style-type: none">Python is a key part of AI programming languages due to the fact that it has good frameworks, such as sickest-learn-Machine Learning in Python that meets almost all requirements in this area as well as D3. is data-driven documents JS. It is among the most efficient

	and user-friendly tools to visualize.
Methodology/Algorithm	<ul style="list-style-type: none"> AI algorithms may help better understand and predict the complex and non-linear interactions between nutrition-related data and health outcomes, particularly when large amounts of data need to be structured and integrated, such as in metabolomics.
Advantage	<ul style="list-style-type: none"> It introduces a new and improved interface for human interaction. It handles the information better than humans.
Disadvantage	<ul style="list-style-type: none"> The difficulties with software development for AI implementation are that the development of software is slow and expensive. Few efficient programmers are available to develop software to implement artificial intelligence.

2. Paper Title	<ul style="list-style-type: none"> Mitchell describes the fears her mentor, cognitive scientist and AI pioneer Douglas Hofstadter, has expressed that advances of artificial intelligence could turn human beings into "relics". Mitchell offers examples of AI systems like Watson that are trained to master specific tasks,
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	<p>and points out that such computers lack the general intelligence those humans have. Mitchell argues that achieving super intelligence would require that machines acquire commonsense reasoning abilities that are nowhere in sight: "Today's AI is far from general intelligence, and I don't believe that machine 'super intelligence' is anywhere on the horizon.</p>
Problem Definition	<ul style="list-style-type: none"> • Python has rich library, it is also object oriented, easy to program. It can be also used as frontend language. That's why it is used in artificial intelligence. Rather than AI it is also used in machine learning, soft computing, NLP programming and also used as web scripting or in Ethical hacking.
Methodology/Algorithm	<ul style="list-style-type: none"> • AI systems work by combining large sets of data with intelligent, iterative processing algorithms to learn from patterns and features in the data that they analyze. Each time an AI system runs a round of data processing, it tests and measures its own performance and develops additional expertise
Advantage	<ul style="list-style-type: none"> • Nutrition analysis tools enable more opportunities to help people understand their daily eating habits, exploring nutrition

	patterns and maintain a healthy diet. Nutritional analysis is the process of determining the nutritional content of food.
Disadvantage	<ul style="list-style-type: none"> Despite its potential to unlock new insights and streamline the way providers, AI may bring considerable threats of privacy problems, ethical, concerns, and medical errors.

3. Paper Title	<ul style="list-style-type: none"> Geoffrey Everest Hinton is a cognitive psychologist and computer scientist born in Britain and living in Canada. He is best known for his work on artificial neural networks. Hinton, Yoshua Bengio, and Yann LeCun won the 2018 Turing Award for their work on deep learning, also done by Hinton. Some people call them the "Godfathers of AI" or the "Godfathers of Deep Learning."
Problem Definition	<ul style="list-style-type: none"> Problem-solving in Artificial Intelligence usually refers to researching a solution to a problem by performing logical algorithms, utilizing polynomial and differential equations, and

	<p>executing those using modeling paradigms. There can be various solutions to a single problem, which are achieved by different heuristics.</p>
Methodology/Algorithm	<ul style="list-style-type: none"> Food is essential for human life and has been the concern of many healthcare conventions. Nowadays new dietary assessment and nutrition analysis tools enable more opportunities to help people understand their daily eating habits, exploring nutrition patterns and maintain a healthy diet. Nutritional analysis is the process of determining the nutritional content of food. It is a vital part of analytical chemistry that provides information about the chemical composition, processing, quality control, contamination of food.
Advantage	<ul style="list-style-type: none"> It is automatic: In machine learning, the whole process of data interpretation and analysis is done by computer. It's very small application to very big and complicated structured machines that help in the prediction and analysis of data.
Disadvantage	<ul style="list-style-type: none"> Easily identifies trends and patterns.

	<ul style="list-style-type: none">• No human intervention needed (automation).• Continuous Improvement.• Handling multi-dimensional and multi-variety data.
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