

# **LITERATURE SURVEY**

**DOMAIN:** Artificial Intelligence (AI)

**PROJECT:** AI-powered Nutrition Analyzer for Fitness Enthusiasts

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**ABSTRACT:** Artificial Intelligence can be applied in multidisciplinary fields, including patient service and care. It enables precise and personalised medical nutrition care by assessing food and nutrient intake, nutritional evaluation. The application of AI for the provision of food services to hospitalised patients is of immense scope. This review details the various ways through which AI can be applied for nutrition assessment. Even though commercial AI-based nutritional assessment systems are available, many do not evaluate the nutrient intake, and the data available through them were not validated. FatSecret is a commercially available AI-based food and nutrient assessment system that can evaluate the food's calorie content. Also, the major challenge posed by such systems is the availability of locally appropriate data sets.

**INTRODUCTION:** Discover why in the next few decades, Artificial Intelligence (AI) will be the biggest opportunity to harness large amounts of data from multiple sources and how to effectively manage and leverage that data to lay the

foundation for successful digital transformation while establishing a significant competitive advantage for your enterprise.

## **LITERATURE SURVEY:**

### **AUTHORS: By Stuart Russell & Peter Norvig.**

This book on artificial intelligence has been considered by many as one of the best AI books for beginners. It is less technical and gives an overview of the various topics revolving around AI. The writing is simple, and the reader can easily understand all concepts and explanations.

The concepts covered include subjects such as search algorithms, game theory, multi-agent systems, statistical Natural Language Processing, local search planning methods, etc. The book also touches upon advanced AI topics without going in-depth. Overall, it's a must-have book for anyone who wants to learn about AI.

### **AUTHORS: John Paul Mueller and Luca Massaron.**

Machine Learning for Dummies provides an entry point for anyone looking to get a foothold on Machine Learning. It covers all the basic concepts and theories of machine learning and how they apply to the real world. It introduces a little coding in Python and R to teach machines to perform data analysis and pattern-oriented tasks.

From small tasks and patterns, the readers can extrapolate the usefulness of machine learning through internet ads, web searches, fraud detection, and so on.

Authored by two data science experts, this Artificial Intelligence book makes it easy for any layman to understand and implement machine learning seamlessly.

**AUTHOR: Vinod Chandra S. S.**

The primary audience for this book is computer science and engineering undergraduate and graduate students. The book uncovers the gap between the challenging environments of artificial intelligence and machine learning. All the concepts are explained with the help of case studies and worked-out examples.

It also encompasses other forms of learning like reinforcement, supervised, unsupervised, statistical learning, artificial intelligence, and machine learning.

**AUTHOR: Ethem Alpaydin.**

The new AI gives a concise overview of machine learning. It describes its evolution, explains machine learning algorithms, and presents example applications. It explains how digital technology has advanced from number-crushing machines to mobile devices, putting today's machine learning boom in context.

The book on artificial intelligence gives examples of how machine learning is being used in our day-to-day lives and how it has infiltrated our daily existence. It also discusses the future of machine learning and the ethical and legal implementation for data privacy and security.