The image features a decorative graphic on the left side consisting of several green elements: a large light green circle in the top left, a smaller medium green circle in the top center, and four leaf-like shapes of varying sizes and shades of green (light green, medium green, and dark green) arranged in a cluster. The leaves have visible veins. The text is positioned to the right of these graphics.

AN ANALYSIS OF PARTICLE SWARM OPTIMIZATION ALGORITHM

Good Afternoon!

WE ARE:

SAMRAT BANERJEE

17030142024

SHRIPAD TAK

17030142032





AGENDA

- ❏ INTRODUCTION
- ❏ PROBLEM STATEMENT
- ❏ LITERATURE REVIEW
- ❏ METHODOLOGY
- ❏ REFERENCES



“

Vasudhaiva Kutumbakam

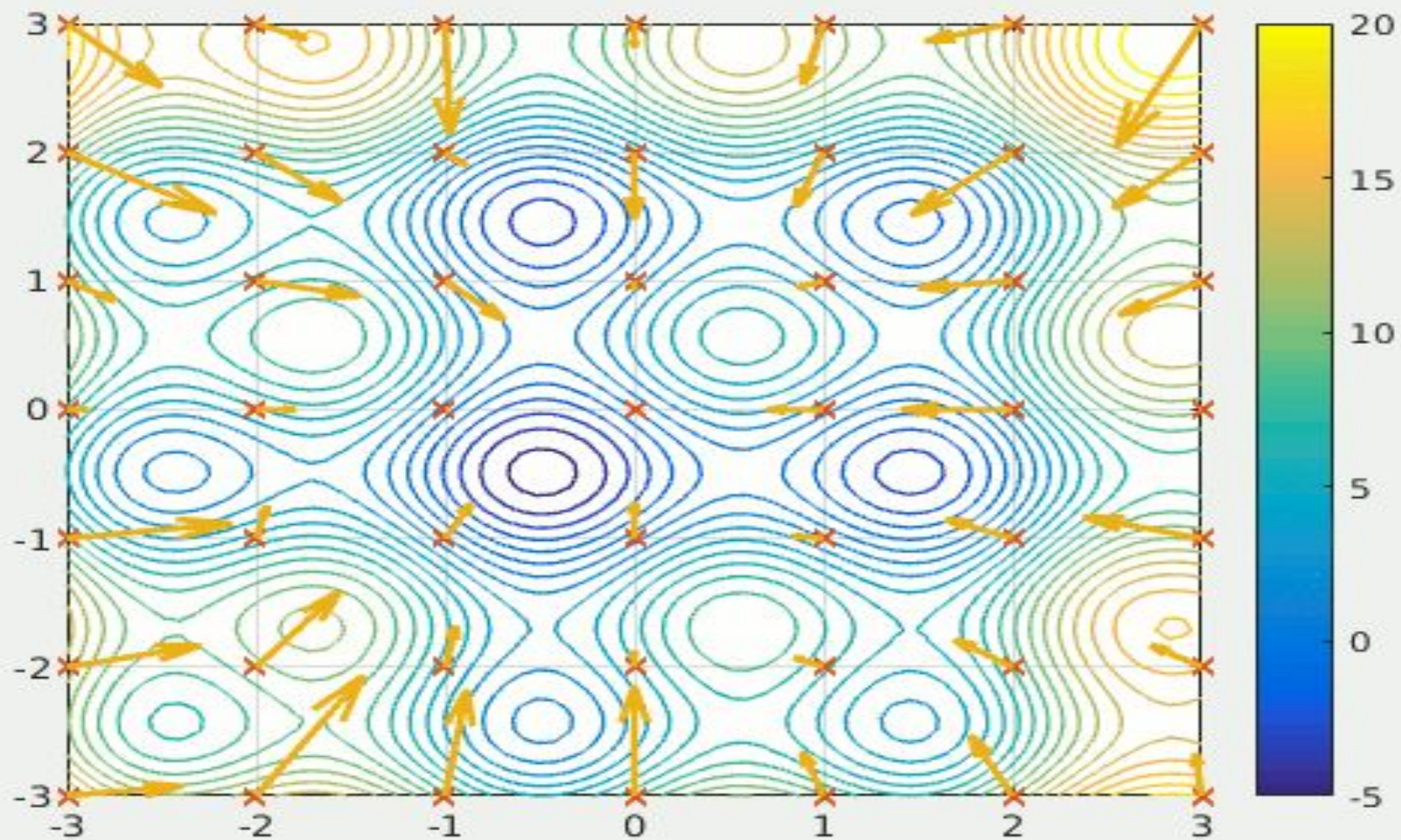
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1. INTRODUCTION



- ❖ Data Mining
- ❖ Bio-inspired Algorithms
- ❖ Swarm Intelligence





2. PROBLEM STATEMENT

HOW TO IMPROVE THE EXISTING ALGORITHM?

- How to make PSO faster?
- How to increase the accuracy?
- How much computational power is the algorithm taking?



3. LITERATURE REVIEW



WORK THAT HAS ALREADY BEEN DONE ON THIS ALGORITHM

**R. Eberhart
and J.
Kennedy**

The main
architects
behind PSO

**Amreen
Khan, Prof. Dr.
N.G.Bawane
and Prof.
Sonali Bodkhe**

Data mining
and clustering

**Kavitha
Sooda, T. R.
Gopalakrishna
n Nair**

PSO, GA,
Network
Routing and
Shortest Path
Algorithm



4. METHODOLOGY

WHAT WE ARE GOING TO DO?

- K-Means
- KNN - (K Nearest Neighbor)
- Random Forest
- Markov Decision Process
- Extreme Programming



5. REFERENCES

The background features several stylized elements: a large dark teal leaf on the left, a light green leaf below it, and a light green leaf to the right of the teal one. There are also several light gray circles of varying sizes scattered across the background.

The research that helped us do our research

- ★ R. Eberhart, and J. Kennedy, (1995) A New Optimizer Using Particles Swarm Theory, Proc. Sixth International Symposium on Micro Machine and Human Science (Nagoya, Japan), IEEE Service Center, Piscataway, NJ, pp. 39-43.
- ★ Amree Khan, Prof. Dr. N.G.Bawane , Prof. Sonali Bodkhe, An Analysis of Particle Swarm Optimization with Data Clustering-Technique for Optimization in Data Mining.(IJCSSE) International Journal on Computer Science and Engineering Vol. 02, No. 07, 2010, 2223-2226
- ★ J. Kennedy, and R Eberhart, (1995), Particle Swarm Optimization, IEEE Conference on Neural Networks, pp. 1942-1948, (Perth, Australia), Piscataway, NJ, IV, 1995.
- ★ A. P. Engelbrecht. (2005), Fundamentals of Computational Swarm Intelligence. Wiley, 2005.

The background features several stylized elements: a large dark teal leaf on the left, a light green leaf below it, and a small green leaf to the right of the light green one. There are also several light gray circles of varying sizes scattered across the background.

Some more of them..

- ★ Kavitha Sooda, T. R. Gopalakrishnan Nair A Comparative Analysis for Determining the Optimal Path using Particle Swarm Optimization and Genetic Algorithms, International Journal of Computer Applications (0975 - 8887) Volume 32- No.4, October 2011
- ★ Ming Li, Wenqiang Du, and Fuzhong Nian, An Adaptive Particle Swarm Optimization Algorithm Based on Directed Weighted Complex Network, School of Computer and Communication, Lanzhou University of Technology, Lanzhou 730050, China, 2 April 2014
- ★ Riccardo Poli, Analysis of the Publications on the Applications of Particle Swarm Optimisation, Hindawi Publishing Corporation Journal of Artificial Evolution and Applications Volume 2008, Article ID 685175, 10 pages doi:10.1155/2008/685175 30 November, 2007
- ★ Particle Swarm Optimization, Edited by Aleksandar Lazinica p. cm. ISBN 978-953-7619-48-0 1. Particle Swarm Optimization I. Aleksandar Lazinica

Thanks!

