



Training System For Artificial Neural Networks Having A Global Weight Constrainer

[View U.S. Patent No. 11,526,760 in PDF format.](#)

WARF: P180189US01

Inventors: Vikas Singh, Sathya Ravi, Vishnu Sai Rao Suresh Lokhande, Tuan Dinh

The Invention

An architecture for training the weights of artificial neural networks provides a global constrainer modifying the neuron weights in each iteration not only by the back-propagated error but also by a global constraint constraining these weights based on the value of all weights at that iteration. The ability to accommodate a global constraint is made practical by using a constrained gradient descent which approximates the error gradient deduced in the training as a plane, offsetting the increased complexity of the global constraint.

Additional Information

For More Information About the Inventors

- [Vikas Singh](#)

Publications

- [Explicitly Imposing Constraints in Deep Networks via Conditional Gradients Gives Improved Generalization and Faster Convergence](#)

Tech Fields

- [Information Technology: Computing methods, software & machine learning](#)
- [Information Technology: Image processing](#)

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846