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Short Communication

Recurrent Neural Network (RNN) in Inventory Management System

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Inventory management systems are the use of control systems and information technology to reduce the need for human work in the production of goods and services. Mechanization is the provision of equipment to assist human operators in the muscular needs of work, while automation also reduces human sensitivity and emotional needs. Automation plays an increasingly important role in the world economy and in everyday experience. Automation often plays an important role and, in competition with the world, is the key to success. In this way, the working attitude of the people has changed a lot. Today time and money are very important. So, we need to make the existing manual system completely automated and thus comes the idea of computerization. One of the inventory management systems. This includes various sections like product description, customer details, inventory control etc.

Inventory management systems are developed for computerization and automate the day-to-day operations. The demand for this type of system is increasing day by day. It is built to cover all key areas of inventory oriented different types of transactions. Through this system, inventory management can process customer data according to customer requirements. This system brings benefits for the customers and it is also helpful for the employees.

Repetitive or Recurrent neural network (RNN) is a type of neural network where the output from the previous step is fed as input to the current step. In traditional theoretical neural networks, all inputs and outputs are distinct from each other, but in the case when the next word in a sentence is predicted, the previous words are needed and therefore the previous words need to be remembered.

The RNN has a "memory" that remembers all the information that has been calculated. It uses the same parameters for each input because it works the same on all input or hidden layers to generate output.

An RNN remembers each information over time. The feature of remembering previous inputs also because it is useful in predicting time series. This is called long short-term memory. Repetitive neural networks are used with convoluted layers to extend even the most effective pixel neighbourhood.

Emerging collaborative global inventory management systems are enabling manufacturers and retailers to gain full visibility into their global inventories. Used in many cases with inventory planning tools, global inventory management systems communicate with ERP systems (both the company and its partners) to provide real-time, end-to-end images wherever they are, wherever they are. Here are three basic steps you can take to begin the process of preparation for RNN:

- Rethink neural feedback strategy
- Reinvent the network
- Reconfigure the new RNN according to the inventory management system.