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## **INTRODUCTION**

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01<sup>st</sup> January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

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(57) Abstract :  
 The present invention provides a Block chain enabled demand forecasting and inventory optimization for drug store that includes a hardware processor, memory, and data acquisition interface to receive historical pharmaceutical data and external factors. A hybrid forecasting engine, using SARIMAX and LSTM models, predicts drug demand patterns. A model selector dynamically chooses the most accurate model output in real time. The system includes a blockchain module implemented in secure hardware to immutably log inventory events like sales, returns, and expiries using smart contracts. A role-based user interface displays forecasts, alerts, and transaction history. The system computes optimal reorder points and supports secure data communication via network interfaces. It is deployable on edge hardware like Raspberry Pi for low-resource environments, enabling real-time, automated, and regulatory-compliant inventory optimization in pharmacies through integrated AI and block chain workflows. Figure 1

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