Connected World.
Connected Experiences.

RUN BETTER DRUG DISCOVERY AND DEVELOPMENT PROCESS

Drug discovery is an art, an art that is time-consuming, prone to error, and costly. It has been a long wait for the pharma industry to find a technology that not only increases the effectiveness of the drug discovery process but also handles the challenges of the traditional drug discovery and development process, namely, time and cost. Organizations are embracing Computer-aided drug discovery, and are placing big bets on the technology while they still adjust their vision to the future of drug discovery and development.

Organizations like Novartis uses Machine Learning to classify digital images of the cell, each treated with different experimental compound. Not only this but also biological insights that may take months to generate can be revealed much faster using automated computer algorithms. GSK, on the other hand, in a consortium aims to change the face of drug discovery by leveraging artificial intelligence to go from drug target to patient-ready therapy in less than a year. Pfizer partnership with Atomwise was in light to identify potential drugs to target up to three disease proteins. The firm has a deep neural network that can analyze millions of molecules quickly to find the right fit.

With benefits like finding potential lead candidates, digital repositories for evaluating chemical interactions, molecule docking, computer-aided drug discovery can easily be called as the "virtual shortcut" to drug discovery.

Accelerating the Drug Discovery process

As part of the TechMNXT Charter, Tech Mahindra believes in leveraging NXTGen technologies to build the solutions of tomorrow. The industry needs a streamlined, automated approach, access, and ability to scan a large amount of data available to identify the right kind of molecules in creating an efficient and effective drug and cut down the cost and the time of the process.

Keeping in mind the need and the demand of the industry we created Computational Drug Discovery (CDD), an Artificial Intelligence-powered solution that helps in optimizing the new drug development cycle. CDD is a one-stop solution that helps in predicting the chances of a molecule to be a successful drug by taking into account its various properties. Characteristics like, deep learning will help to understand the underlying connection between different sets of parameters of drug properties, and helps in selecting the right molecules to speed up and reduce the cost associated with the whole drug discovery and development process.

The ability to rationalize and make right predictions combined with our deep domain expertise, a vast amount of drug research data, AI COE with expertise in random forests, Support Vector Machines (SVM), and deep learning neural network, makes it a great offering.

Computer-aided drug discovery is the present and the future of drug development. It has helped the researchers to bypass the tiring process of studying thousands of molecules and has been advantageous to the innovators in many more ways. With changing times it is expected that the number of drug discovery projects is going to increase and so is the demand for computer-aided drug discovery.

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