Cellular
Image Classification

MassiveAnalytic
Precognition Machines

Unaffordable Drug Costs

Due to the rising cost of drugs and medical treatments in recent years, many patients have had to go without potentially life-changing treatments. One of the reasons behind the cost is how long it takes to bring new treatments to market. Despite improvements in technology and science, research and development continue to lag. Finding new treatments takes, on average, more than ten years and can cost hundreds of millions of dollars.

AI Can Lower the Cost of New Drug Discovery

AI has the power to improve and expedite the drug discovery process dramatically. By removing experimental noise and more accurately classifying medical imagery, researchers will have a clearer picture of how a drug interacts with specific cells—narrowing the list of potential leads needed to be explored. This can significantly decrease the time and cost of developing new treatments, ensuring these treatments get to patients faster.

Removing the Barriers to Drug Discovery

Our Decision Intelligence enables researchers to evaluate better drug effectiveness based on its impact on hundreds of distinct genetic perturbations.

In one project, Massive Analytic undertook work to understand better how drugs interact with human cells by analysing medical imagery, disentangling the experimental noise from actual biological signals and then classifying those images of cells.

Using Nethra Video Analytics, part of our Healthcare Decision Intelligence Platform, sixty-thousand images of cells were classified under one of 1,108 different genetic perturbations.

Massive Analytic identified the Small Interfering (si) RNA-the biological signal from the experimental noise applied to the cells, including batch normalisation, on plate imagery to achieve robust classification in real-world analysis with a validation accuracy of over 75%.

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