Modelos Inteligentes para predicciones de epidemias

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La Inteligencia Artificial (IA) y en concreto el Machine Learning (ML) está siendo utilizada para resolver diferentes problemas, desde la detección temprana de epidemias, al diagnóstico rápido de casos, pasando por el seguimiento de los tratamientos, o la detección de posibles infectados con cámaras térmicas que permiten detectar la fiebre. Esta misma tecnología se utiliza también para la creación de vacunas. De hecho la Inteligencia Artificial está consiguiendo reducir el tiempo de desarrollo de un medicamento, reduciendo a menos de 12 meses lo que normalmente tarda años en comprobarse. El ejemplo es la DSP-1181, una molécula desarrollada íntegramente por inteligencia artificial cuyo medicamento resultante va a ser probado en humanos. Esta enfermedad y la manera de afrontarla cambiará sustancialmente el panorama mundial en todos los sectores por cuanto vamos abocados a una contundente transformación digital. La potencia de la IA está permitiendo modelas el desarrollo de epidemias, identificar zonas adecuadas en las que hacer test y la creación de mapas de calor, modelos evolutivos, minería de textos para la identificación de los mejores recursos bibliográficos, curvas de mortalidad, modelos de necesidades de material y personal sanitario, de necesidades asistenciales, etc. Crisis como las actuales está cambiando nuestra forma de vida y afectando nuestra forma de trabajar, impulsando nuevos modelos de Teletrabajo, e-learning, salud, modo de relacionarnos, economía, mercados… Durante los últimos meses se ha hablado, y mucho, de la conveniencia de que las empresas contaran con estas transformaciones digitales, advirtiendo de que cuanto más digital fuera un negocio más preparado iba a estar ante situaciones como estas.

Ante esta pandemia y en un entorno volátil, incierto, complejo y ambiguo la IA pone al alcance soluciones que hace muy pocos años serían impensables y todo gracias a la elevada capacidad de los sistemas de cómputo actuales y a la gran cantidad de datos existentes, muchos de ellos adquiridos en tiempo real. Predicciones y acciones gestionadas con IA reducen el tiempo de toma de decisiones; mejoran las competencias de los responsables de tomar decisiones en base a datos reales y estimaciones sólidas. La IA y el ML están creando sistemas de ayuda a la toma de decisiones y permite predecir situaciones problemáticas y anticipar soluciones, en base a conocimientos sólidos y contrastados.

Esto requiere el desarrollo de una plataforma que facilite la implementación de modelos inteligentes para la predicción de aspectos ligados a pandemias como la producida por el COVID-19. Además esta herramienta sería capaz de tratar otro tipo de epidemias o pandemias, con las que convivimos actualmente, como el catarro o la gripe o como las que están en ciernes y puedan llegar del extranjero. Por tanto se trata de una plataforma flexible, capaz de ingerir datos de forma sencilla de bases de datos nacionales e internacionales, de páginas webs, de sistemas de adquisición de datos, etc. y de generar sistemas de ayuda a la toma de decisiones [0-205].

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