Supporting AI Initiative to Detect COVID-19 from Chest X-rays

Graz (Austria): Graz-based company KML Vision launches a new and free image analysis application capable of detecting COVID-19 cases from chest X-rays on their online platform IKOSA®. The underlying artificial intelligence (AI) model was published by a Canadian research group a few days ago. By providing this algorithm as a service for free in a fast and easily accessible way, KML Vision applies their technology to support the global AI research community in our common fight against the new coronavirus.

An effective screening of patients with suspected coronavirus disease is a critical step in the fight against this pandemic. A complementary screening method is radiography, since characteristic patterns for COVID-19 can be observed in the lung. A Canadian research group from the University of Waterloo and DarwinAI used chest X-ray image data to develop an AI system capable of distinguishing between normal and COVID-19 patients. To support the fight against the virus, they published the algorithm and data in the COVID-Net open source initiative at the end of March, calling for contributions and further improvement.
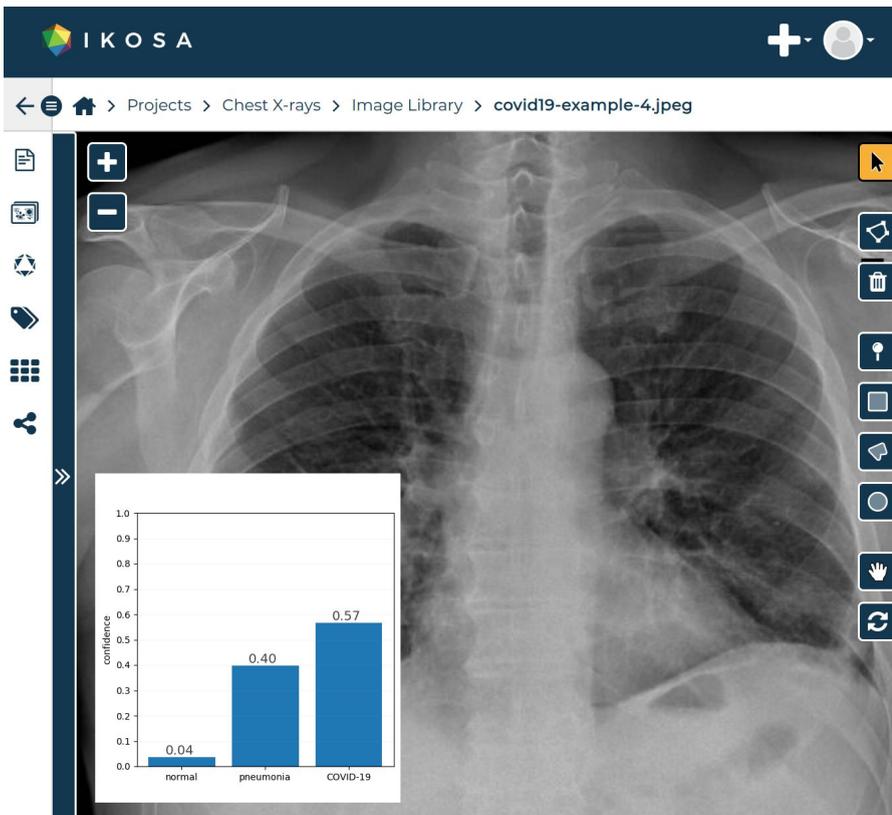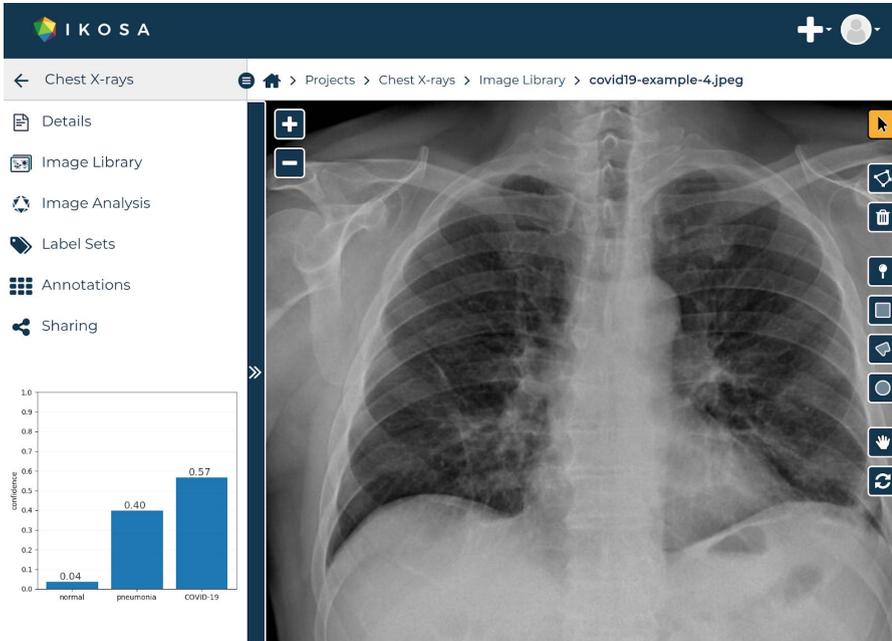
In order to make it easily accessible to all interested researchers, KML Vision is hosting the algorithm on their online platform IKOSA® for free, starting from today. A major advantage of the platform is the simple and rapid integration of new image analysis applications and providing them at scale to be used by many users simultaneously. This way, just a few days after its publication, KML Vision can already offer this tool to the global community for evaluation.
IKOSA® can be accessed via a standard web browser. Its self-explanatory user interface enables everyone to try out the COVID-19 and other image analysis applications in just a few clicks and without programming knowledge. Within seconds, the application classifies an input chest X-ray as a normal, pneumonia, or COVID-19 case. A numbers game regarding the speed: Assuming that there is a chest X-ray taken of every human on earth, the whole world population could be checked within days.

It is important to emphasize that the published algorithm is only a first step towards a diagnostic support tool and also lab tests are still required for confirmation. In the current version it is available for research use only and must not be used for any diagnostic purposes. *"However, the hope is that open access to such algorithms and data sets will be leveraged to accelerate developments towards a tool for clinical use,"* states co-founder and CEO Philipp Kainz, *"Collaboration of the global AI research community is a key ingredient to validating concepts for next-generation digital health solutions."*

The deep-tech company KML Vision GmbH is based in Graz and was founded in 2018. The team of KML Vision has strong expertise in the smart practice of automated image analysis based on artificial intelligence. For their customers in Life Sciences, Pharma and Healthcare they created IKOSA®. This highly scalable software platform empowers research teams to work with big image data in order to support and automate tedious, time-consuming tasks and achieve accurate and reproducible results.

Images: Screenshots of KML Vision's online platform IKOSA and an analyzed chest X-ray.

References and further information

www.kmlvision.com
www.ikosa.ai
https://uwaterloo.ca/news/news/researchers-use-open-source-software-improve-covid-19