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NEWS

RSNA Press Release

SIIM, FISABIO, and RSNA Recognize Winners of the COVID-19 Detection and Localization Challenge on Kaggle

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(Leesburg, VA, September 20, 2021) The Society for Imaging Informatics in Medicine (SIIM), in partnership with The Foundation for the Promotion of Health and Biomedical Research of Valencia Region (FISABIO), and the Radiological Society of North America (RSNA) announced the official results of their joint machine learning challenge today during SIIM's 6th annual Conference on Machine Intelligence in Medical Imaging (CMIMI).

The SIIM-FISABIO-RSNA Covid-19 Detection Challenge required teams to develop high quality computer vision models to detect and localize COVID-19 pneumonia to help doctors provide a quick and confident diagnosis. 1,786 participants on 1,305 teams from 82 countries took part in the competition.

The challenge made use of augmented annotations on the public chest radiograph datasets from the Medical Imaging Data Resource Center (MIDRC) - RSNA International COVID-19 Open Radiology Database (RICORD) and BIMCV-COVID-19 Dataset, created by an international group of volunteer radiologists from Brazil, Spain, and the U.S. using a commercial web-based tool from MD.ai.

"*SIIM is excited to have hosted the COVID-19 Detection Challenge in conjunction with RSNA, FISABIO, Kaggle, HP and Intel,*" said Paras Lakhani, MD, Annotation Lead & Member of the SIIM Machine Learning Tools & Research Subcommittee. "*Congratulations to the winners and contestants for their hard work, as the solutions have the potential to positively impact patient care and help clinicians manage COVID-19 patients.*"

"*We're really pleased to see how many people have come together from across the world to do great work with this data,*" said John Mongan, MD, PhD, Chair of the RSNA Machine Learning Steering Subcommittee. "*It's great to see the data we collected being put to good use; we anticipate that the models developed here will be further improved by the additional COVID-19 data currently being collected by MIDRC .*"

"*FISABIO wishes to express its satisfaction for having been able to achieve one of its fundamental objectives - proposing and organizing, together with SIIM, Kaggle, HP and RSNA, this challenge that contributes to generating competitive and quality solutions in the detection of COVID-19 through RX, aimed to reach the population as a whole,*" said Maria de la Iglesia Vayá, PhD and IP from Biomedical Imaging Lab, FISABIO-CIPF. "*We also appreciate the dedication, interest and proposals of all participants and we especially congratulate the winners. We are convinced that all this effort will have a positive impact on the medical community and on patient care.*"

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"It's been inspiring to see teams from around the globe, from different backgrounds, come together and use data to develop models that will help future Covid-19 research," said Jeri Culp, Head of Data Science, Advanced Compute and Solutions, HP Inc. *"Z by HP and Intel are committed to providing the data science community with the right tools and solutions for success and we're proud to support the winners of the SIIM-FISABIO-RSNA Kaggle Challenge."*

The competition was run on a Kaggle, Inc. platform (owned by Google LLC), which provides access to datasets, a discussion forum for participants, the repository of submitted results and a leaderboard that runs throughout the challenge.

This challenge was supported by the National Science Foundation (NSF) Convergence Accelerator Grant that SIIM, along with its collaborators, was awarded in September 2020. SIIM's Corporate Impact Partners, HP and Intel, provided $100,000 in prizes, in addition to a special prize - a high-end workstation for the Best Student Team.

The Top 10 Winning teams are:

- 25 Minutes
- A Team
- [Aillis] Yuji & Ian
- RTX 4090 - Winner of the Special Prize for the Best Student Team
- Ayushman Nischay Shivam
- Quanta AI Lab
- [dsmlkz] School Zerde
- RTX 3090
- Watercooled
- Guanshuo Xu

Complete results and detailed challenge information is available on the SIIM website as well as on the Kaggle website.

SIIM, FISABIO, and RSNA will use their respective talents and resources to promote deployment of the winning algorithms into clinical use for the benefit of the greater medical imaging community, improving quality and efficiency in healthcare.

About the Society for Imaging Informatics in Medicine

The Society for Imaging Informatics in Medicine (SIIM) is the leading healthcare professional organization for those interested in the current and future use of informatics in medical imaging. The society's mission is to advance medical imaging informatics across the enterprise through education, research, and innovation in a multi-disciplinary community.

About FISABIO, The Foundation for the Promotion of Health and Biomedical Research of Valencia Region

The Foundation for the Promotion of Health and Biomedical Research of Valencia Region, FISABIO, is a non-profit scientific and healthcare entity, whose primary purpose is to encourage, to promote and to develop scientific and technical health and biomedical research in Valencia Region. The BIMCV facility is connected with a multi-level vendor neutral

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archive (VNA). The imaging population facility is storing data from the Valencia Region, which accounts for more than 5.1 million habitants.

About The Radiological Society of North America (RSNA)

RSNA is an association of radiologists, radiation oncologists, medical physicists and related scientists, promoting excellence in patient care and health care delivery through education, research and technologic innovation. The Society is based in Oak Brook, Ill. (*RSNA.org*). RSNA supports and facilitates research in the use of artificial intelligence in medical imaging by sponsoring an ongoing series of AI challenge competitions.

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