

Hospital Clínic de Barcelona and Enzyme Advising Group apply Artificial Intelligence to accelerate the diagnosis of lung diseases

The project resulting from this agreement will be carried out using the Computer Vision Platform and KomOmbo, two SaaS platforms developed within the framework of Enzyme Technologies.

Barcelona October 5, 2021.- Hospital Clínic de Barcelona (HCB), recognized as the best hospital in Spain and ranked 21st in the world, and the “Fundació Clínic per a la Recerca Biomèdica”, have signed a research and strategic development agreement with Enzyme Advising Group that aims to develop artificial intelligence algorithms to accelerate the diagnosis of lung diseases.

The initial project will focus on improving, using artificial intelligence and computer vision, the diagnosis of a chronic disease that affects both lungs diffusely and is characterized by progressive scarring that causes the lung to lose flexibility, and performance deteriorates over time.

Patients with this disease have a high mortality rate and the treatments available to address them delay, but do not reverse, the pathology. Therefore, the use of artificial intelligence and new diagnostic techniques make it possible to detect early variations in lung tissue before the disease progresses, to apply treatment as soon as possible, improving the life quality of patients.

The development of the Artificial Intelligence algorithms will be carried out by articulating a joint process of innovation and co-creation between medical teams, data scientists and artificial intelligence engineers, where expert knowledge will be collected through tools developed by Enzyme.

AI based Technologies

The project will be carried out using two SaaS platforms developed within the framework of Enzyme Technologies. On the one hand, the Smart Vision Platform (platform for the development, management and consumption of artificial vision solutions), will allow automating manual classification processes based on visual inspection at the same time that will allow finding patterns, not detected by specialists.

On the other hand, KomOmbo, Enzyme's platform that works as a marketplace for the exchange of data and knowledge, adds a layer of Federated Learning ensuring privacy and allowing the exploitation of the true value of the data, it will be used to create the infrastructure of collaborative training in future extensions of this project.

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Through the expert analysis of images and information from the HCB case bank, and the use of Enzyme's integrated Computer Vision and KomOmbo solutions, support will be provided to medical teams that will improve response time in the diagnostic process.

Antonio Martínez, Head of the Pathological Anatomy service of the Center for Biomedical Diagnosis of the Hospital Clínic, states "The Enzyme Advising Group proposal seemed innovative and very aligned with the objectives of the Hospital Clínic de Barcelona. It is a highly replicable project for other pathologies that can represent a before and after in the diagnosis of diseases, both common and rare. In this way from the Clinic, we take another step as a benchmark in the field of Computational Pathology through a revolutionary technology and a trusted partner "

In this project, guaranteeing the security of patient data is a strategic priority, and therefore, it is ensured in two ways. On the one hand, to develop the algorithm, anonymous healthcare surplus samples from the HCB are used and, additionally, each component of the solution is designed to ensure the confidentiality of the data processing.

Álvaro Ortín, CEO of Enzyme Advising Group, states "at Enzyme we have always invest in and work with AI, which we can now apply to the health sector as well. For this reason, the agreement reached is an important step and we are delighted to be able to collaborate with the HCB in this innovative initiative and to be able to contribute our knowledge in AI to accelerate the diagnosis of these and other diseases, thus improving the quality of life of patients".

About the Hospital Clínic de Barcelona

The Hospital Clínic de Barcelona, with more than 100 years of history, is a benchmark public health center in the city of Barcelona, in Spain and in the world, with a clear desire for excellence in its three main areas of action: care, research and teaching.

About the Fundació Clínic per a la Recerca Biomèdica

The Fundació Clínic per a la Recerca Biomèdica is a non-profit institution that was created in May 1989. Its objectives are to promote, manage and carry out research in biomedicine and teaching related to health sciences, especially in the Hospital Clínic de Barcelona and in all areas where the Hospital operates, either by itself or in collaboration with other entities.

About Enzyme Advising Group

With more than 10 years of experience, Enzyme is an AI product and services company dedicated to the research, development, implementation and integration of technological solutions based mainly on data management, artificial intelligence and blockchain. Winner of

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several international awards for projects carried out in Artificial Intelligence and Computer Vision, Enzyme currently employs more than 100 people distributed in its offices in Madrid and Barcelona, and clients in more than 15 countries. Since 2017, Grupo Pirénées Andorra, the main brand of the Andorran principality, has been Enzyme's main investment partner.

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