

Applicant

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Project Title

Improving cardiovascular disease prediction with AI-enabled ECGs and retinal images using the CLSA cohort

Project Summary

This project, led by Dr. Avram and Dr. Rouleau, aims to revolutionize cardiovascular disease (CVD) prediction using the Canadian Longitudinal Study on Aging (CLSA) dataset and advanced AI algorithms. Leveraging 30,000 participants' data from the comprehensive cohort CLSA, it seeks to improve upon traditional models like the Framingham Risk Score, enhancing precision in identifying high-risk patients of cardiovascular disease. The study will develop a digital biomarker using a comprehensive approach, incorporating clinical, ECG and retina images from individuals in CLSA for cardiovascular risk prediction. It aspires to set a new standard in CVD risk prediction and diagnosis, outperforming existing methods and tailoring solutions to the Canadian population, thus potentially transforming cardiac care practices.

Keywords

Artificial intelligence, ECG, cardiovascular disease, risk prediction, digital biomarker, retinal cohorts