



Application number/Title: 45682 - Automated disease and disease risk detection from retinal images with deep learning

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Keywords provided by the Applicant PI to describe the research project:
deep learning, disease detection, disease prediction, retina, screening

Application Lay Summary:

The retina offers a unique window on a person's health. The smallest blood vessels, present everywhere in our body, are visible in the eye and not covered by skin. This allows to detect small changes to the blood vessels which are indicative of increased risks for cardiovascular, neurological and systemic diseases. Furthermore, pictures from the retina can be taken in a quick and non-invasive way, giving it a high potential as screening tool.

In this 3 year project we want to study how artificial intelligence can be applied to automatically detect diseases and increased risks for diseases from retinal images. This research has the potential to have a large impact on public health. In the future, it could allow to act on upcoming diseases before quality of life is reduced. Enabling us to increase the number of healthy life years we can enjoy while reducing public healthcare expenses.