EDITH COWAN UNIVERSITY

PROJECT DETAILS

Project Title:

A Machine Learning Approach for Predicting Coronary Artery Disease Risk Using Gut Microbiome Data

Project Summary:

Coronary artery disease (CAD) characterised by a buildup of plaque in the coronary arteries, is a prevalent and serious cardiovascular condition that affects a large portion of the global population. The conventional list of CAD risk factors (genetic predisposition, lifestyle, cholesterol levels, smoking, age, sex, and family history) may not fully indicate individual susceptibility. Recent studies suggest a link between gut microbiota composition and CAD development. By leveraging the power of ML in identifying complex patterns in large datasets, this research proposes to develop a model that accurately predicts CAD risk based on the composition of an individual's gut microbiome.

Preferred Applicant Skillset:

We are looking for a self-motivated PhD candidate with excellent computer programming, organisation, problem-solving and project management skills. Candidates with strong quantitative skills including familiarity with SPSS and state of the art deep learning approaches is desired.

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