Development of CDPoRT (Chronic Disease Population Risk Tool) to facilitate public health decision-making

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DATA ANALYTICS & ARTIFICIAL INTELLIGENCE

HUMAN HEALTH

UNIVERSITY OF TORONTO | Engineering

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Background

Public health professionals often engage in complex cognitive tasks using data-driven decision-making tools.

With the recent increase in the development of AI decision-making tools for healthcare, there is an opportunity to use human factors principles to improve the user's experience.

This work focuses on supporting the refinement of a decision support tool called "CDPoRT" (Chronic Disease Population Risk Tool).
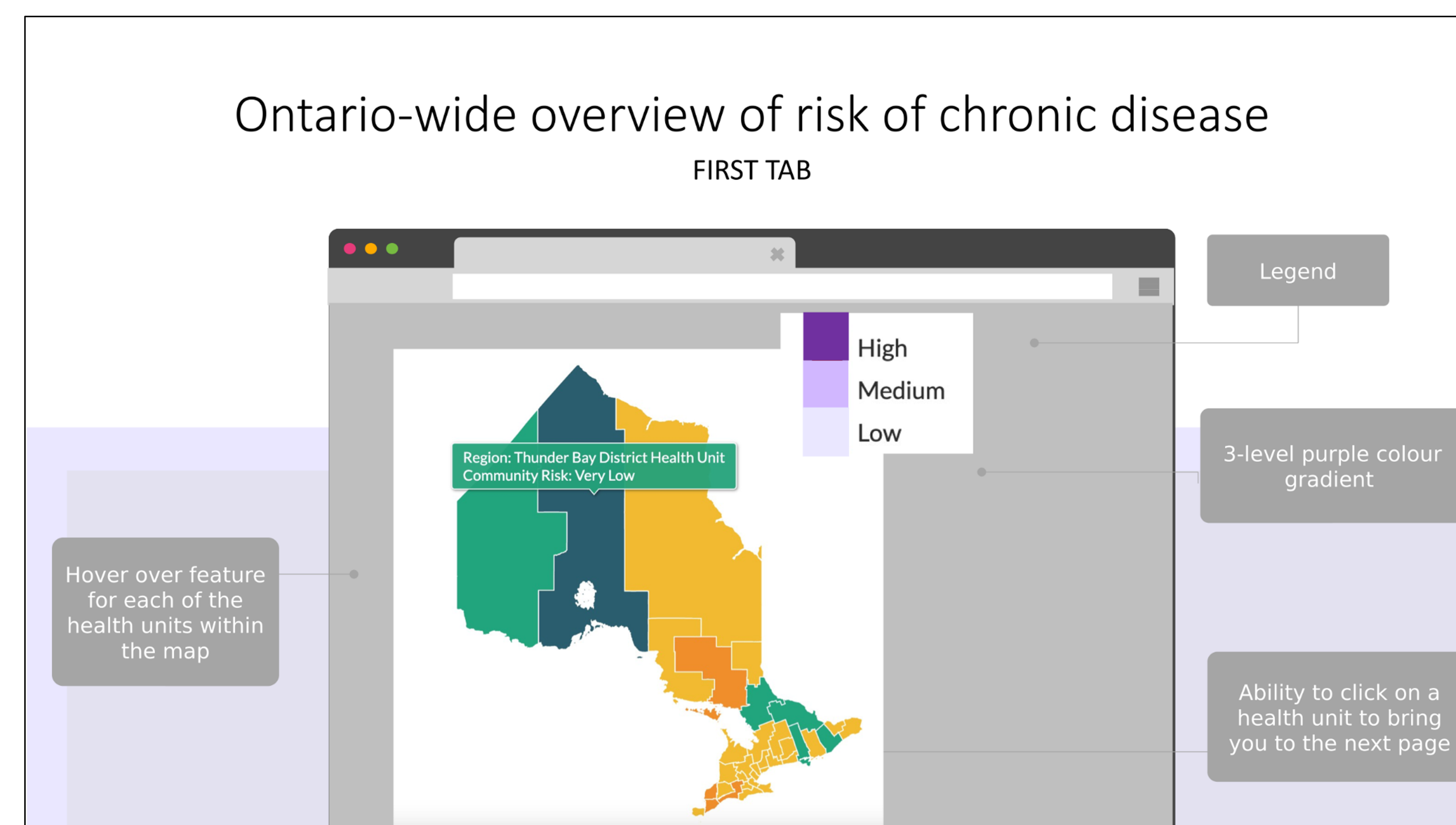
Methodology

CDPoRT is based on a Machine Learning model that uses data from the Canadian Community Health Survey to predict the ten-year risk and number of new cases of chronic disease within each health region in Ontario.

We focused on the backend and frontend development of CDPoRT, using human factors methodologies and tools that will be used to improve its design.

Results

CDPoRT provides province-wide view (below), and geographic analysis and data stratification by public health units.

Ontario-wide overview of risk of chronic disease
FIRST TAB

Legend

High
Medium
Low

3-level purple colour gradient

Region: Thunder Bay District Health Unit
Community Risk: Very Low

Hover over feature for each of the health units within the map

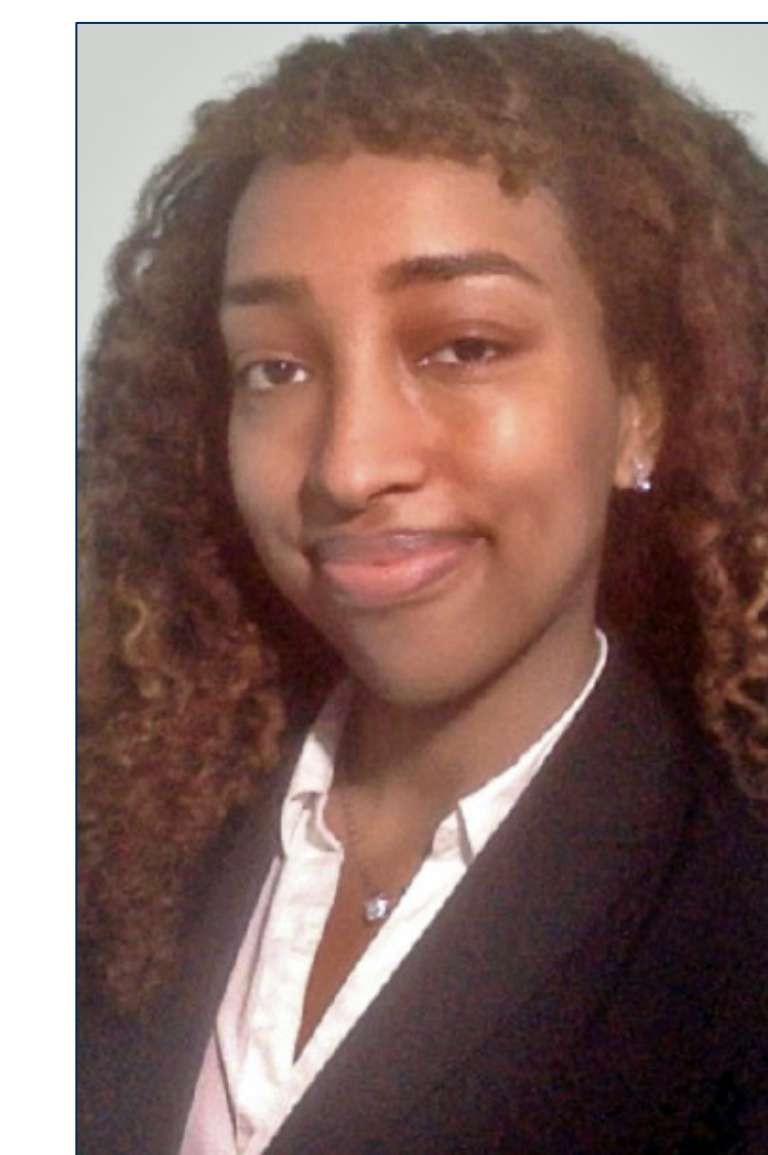Ability to click on a health unit to bring you to the next page

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