UNIVERSITY of GUELPH

COLLEGE of ENGINEERING AND PHYSICAL SCIENCES

SCHOOL OF COMPUTER SCIENCE

PhD.CSCI Seminar

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A Framework for Trustable and Interpretable AI in Agriculture

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ABSTRACT:

As the anticipated global population growth rate is subject to surpass agricultural production, the agricultural sector is currently left with an extensive challenge to adequately reach the needs of our growing global population. The continued advancements in AI systems have promising means to help support the agricultural sectors with food production and farm management. The emergence of AI systems shed light on potential opportunities to augment the agricultural sector, yet there still lie concerns around trust. The purpose of this research is to highlight existing literature surrounding the current challenges in trustable AI generally, as well as the challenges specific to the agricultural sector. This research will examine the importance of human trust in AI systems in order to develop strategies for value alignment, increase adoption and improve interpretability between end users (farmers) and the AI system. We aim to investigate a framework for interpretable AI in agriculture to involve the concept of human-in-the-loop (HITL) as a way to enable and establish semantic interoperability for end users.