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Theme 1: Design, Optimization and Implementation of the Observing System

Theme 2: Observing in Support of Adaptation and Mitigation

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Poster title (brief) Arctic Observing Systems, the Next Steps: Empowering Circumpolar Peoples with Machine Learning Tools

Abstract - text box
Every field develops to the point when it becomes a computer science. Today's modern state-of-the-art machine learning and deep learning tools have demonstrated excellent performance in tasks such as image analysis, speech recognition, document analysis, and spam detection. In recent years, several studies have shown that deep learning models can also achieve impressive performance on more challenging tasks, such as in the colorization of black and white images, remote sensing, and medical diagnostics. Despite the wide use of these tools across industries, most people don't know that they interact with it daily (e.g., Netflix, Facebook, Instagram) or think about how it happens. Traditionally the field of machine learning technology has been attributed to the computer science discipline. This may no longer be the case. In this poster, on my own personal experience, I would like to convey a strong message to the Arctic peoples: Do not wait for someone to develop computer systems for you and solve your Arctic challenges. Instead, teach yourself "the machine learning" via free online courses and solve challenges self. In this poster, I will show my personal applications of machine learning tools that focus on the understanding of the Arctic environment and Arctic marine transportations. In addition, I am also willing to hold a step-by-step demonstration or a workshop on how this can be done at a low cost.