**Proceedings of the Canadian Conference on Artificial Intelligence**

# Advancing NHL Analytics through Explainable AI

**Miles Pitassi**[1] **Robin Cohen**[1]

[1]**University of Waterloo**

**Canadian Artificial Intelligence Association (CAIAC)**

**Published on:** May 27, 2024

**URL:** https://caiac.pubpub.org/pub/cvod1hqy

**License:** Creative Commons Attribution 4.0 International License (CC-BY 4.0)

## ABSTRACT

This paper introduces a novel three-phase framework designed to enhance trust and explainability in the integration of artificial intelligence (AI) models within the National Hockey League (NHL). The proposed framework addresses key barriers to the widespread adoption of these models, namely: the need for explanations that cater to various stakeholders, the requirement for explanations to be tailored to specific machine learning models, and the challenge of ensuring model reliability and purpose. A case study demonstrates the framework's effectiveness, using an AI model to predict power play performance based on player attributes. This research aims to bridge the gap between AI's theoretical potential and its practical application in NHL sports analytics, positioning the framework as a key tool to enhance understanding and acceptance of these technologies.

**Article ID:** 2024L3

**Month: May**

**Year: 2024**

**Address:** Online

**Venue:** The 37th Canadian Conference on Artificial Intelligence

**Publisher: Canadian Artificial Intelligence Association**

**URL:** https://caiac.pubpub.org/pub/cvod1hqy

---

Visit the web version of this article to view interactive content.