MBA16

LEVERAGING EMERGING TECHNOLOGIES FOR SUSTAINABLE CROSS-INDUSTRY INNOVATION IN ALASKA: A DESIGN SCIENCE RESEARCH APPROACH

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Abstract

This research investigates the role of emerging technologies, including artificial intelligence (AI), machine learning (ML), and cloud computing, in driving sustainable cross-industry initiatives in Alaska, utilizing a Design Science Research (DSR)methodology. Alaska's distinct geographic and economic context demands innovative approaches to challenges in sectors such as energy, healthcare, fisheries, and tourism. Leveraging AI and ML for predictive analytics and operational efficiency, industries are not only enhancing decision-making and reducing waste but also aligning with sustainability goals. Cloud computing fosters collaboration across industries, enabling shared efforts that prioritize environmental resilience.

The study follows a DSR framework to develop and evaluate technological artifacts addressing industry-specific challenges. Data will be collected through case studies, stakeholder interviews, and prototype testing. The study aims to showcase how these technologies are reshaping Alaskan industries to promote sustainable growth while addressing local challenges. Furthermore, the research aims to contribute to the broader understanding of AI integration in rural settings, offering scalable insights for regions with similar challenges.

Keywords: Design Science Research (DSR), sustainability, artificial intelligence (AI), emerging technologies

Conference Track

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