

Assessing the Impact of Generative AI on Canadian Labor Market: An Empirical Approach



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The rapid advancement and integration of Generative AI and Large Language Models (LLMs) into various sectors raise significant concerns about their impact on the labor market. This research assesses the extent to which occupations in Canada are exposed to these technologies. Using data from the Canadian Occupational and Skills Information System (OaSIS) and adapting the methodology of Felton et al. (2018, 2021, 2023), we calculated AI Occupational Exposure (AIOE) scores for 900 occupations. The findings demonstrate a high correlation between Canadian and U.S. occupations in terms of AI exposure, with Pearson and Spearman coefficients of 0.888 and 0.883, respectively. Approximately 45% of the Canadian workforce, or 9.2 million people, are in sectors with high AI exposure, indicating significant potential for job transformation. Notably, roles in management and business-related occupations, which account for over 25% of total employment, show an AI exposure rate of 86% and 88%, respectively. The study highlights the need for upskilling in highly exposed occupations, particularly in management, finance, and applied sciences. While this research addresses an important gap in understanding Generative AI's impact on the Canadian labor market, it also identifies several limitations, including the lack of detailed ability importance data and confidentiality restrictions on fine-grained employment data. Future research should explore the regional impacts of Generative AI, as well as the effects on various demographic groups.

Biography:

Aida Kazemi is a dedicated scholar and educator specializing in business ethics and labor market dynamics at Yorkville University. Currently pursuing a Doctorate in Business Administration (DBA) at George Fox University, Aida Kazemi has a strong background in both qualitative and quantitative research methodologies. She has taught various courses at Canadian universities to undergraduate and graduate business students and have a keen interest in exploring the impact of emerging technologies, such as AI, on the workforce. Known for her passion for teaching and research, Aida Kazemi aims to bridge academic knowledge with practical applications to enrich student learning and contribute to policy discussions.