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LEVERAGING DEEP LEARNING FOR MULTIMODAL DATA ANALYSIS IN CREDIT RISK ASSESSMENT

Abstract: Credit risk assessment is a multifaceted process in which lenders employ various measures to evaluate the risk associated with borrowers, ranging from individual consumers to large-scale companies. To achieve a comprehensive understanding of credit risk, lenders extensively analyze a wide array of data sources, encompassing images, text, social networks, time series data, and traditional financial variables. Deep learning methodologies offer significant advantages in leveraging diverse data from multiple sources to generate accurate predictions and provide valuable insights into the complex relationships inherent in these inputs. This presentation explores different strategies for handling multimodal data in both consumer and corporate lending using deep learning techniques, with a particular emphasis on transformer models. The discussion will encompass the utilization of time series data, ego networks, and textual information, with conventional financial variables. Real-world use cases will be presented to showcase the predictive gains obtained through multimodality and demonstrate the valuable insights that can be extracted from these diverse data sources.

Biography: Dr. Cristián Bravo is Professor and the Canada Research Chair in Banking and Insurance Analytics at the Western University. He also serves as the Director of the Banking Analytics Lab. His research lies at the intersection of data science, analytics, and credit risk, researching how techniques such as multimodal deep learning, causal inference, and social network analysis can be used to understand relations between consumers and financial institutions. He has over 75 academic works in high-impact journals and conferences in operational research, finance, and computer science. He serves as an editorial board member in Applied Soft Computing and the Journal of Business Analytics and is the co-author of the book “Profit Driven Business Analytics”, which has sold over 6,000 copies to date. Dr. Bravo has been quoted by The Wall Street Journal, WIRED, RFI (France), CTV, The Toronto Star, The Globe and Mail, and Global News. He is also a regular panelist at CBC News' Weekend Business Panel where he discusses the latest news in Banking, Finance and Artificial Intelligence.

Zoom: <https://ulaval.zoom.us/j/62680136430?pwd=eldBYjdNTG5QR2VxTTFqbVM4UGVRZz09>

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Université Laval
Pavillon Alexandre-Vachon
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Ouvert à tous

Responsable:
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