Seminario de Microeconomía Aplicada - Anticipating the Future of Work: A Framework for Assessing Automation Risks

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Abstract: The proliferation of automation, fueled by advancements in artificial intelligence (AI), including Generative AI (GAI), is revolutionizing various sectors by optimizing workflows, enhancing profitability, and minimizing repetitive tasks performed by workers. While this revolution presents opportunities for increased productivity and the development of new services and industries, it also brings forth significant concerns regarding job disruptions, skill shortages, and exacerbated inequalities. Policymakers, companies, and workers are confronted with the urgent necessity to assess automation risks across tasks, jobs, and sectors to devise effective strategies for operations and workforce management. This presentation introduces a novel online framework that leverages deep learning algorithms, specifically SBERT and Roberta, and data mining techniques to assess and forecast automation risks across various tasks, occupations, and sectors, providing a critical five-year outlook. We will delve into the model, which aims to capture the anticipated evolution of jobs in the foreseeable future, and provide actionable recommendations for various stakeholders. Policymakers can utilize these findings to steer state investment strategies in education and industry subsidies, companies to guide up-skilling, reskilling, and hiring campaigns, and employees to identify jobs and sectors at high risk of automation. Additionally, we will explore potential applications of this framework in the context of Colombia. Join us to explore the future of jobs and anticipate the impact of automation in our fast-paced evolving work landscape.

Pierre Bouquet is a visiting student at the Center for Transportation & Logistics. He works with Dr. Yossi Sheffi on the impact of AI and automation on supply chains for his Master's thesis. Pierre received a BSc in Mechanical engineering from the Swiss Federal Institute of Technology in Lausanne (EPFL) in 2020. He is pursuing of MSc in Mechanical engineering with a minor in Data Science at the same institution. His research interest are: Mechanical engineering; Operations; Supply chain; Data Science; Machine Learning; Deep learning.

Tiempo de exposición: 1 hora 30 minutos