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# AI: FUTURE OF WORK

How will machines impact what humans do in the future?

A critical question that confronts policy makers is how to think about human employment in an era of increasingly intelligent machines that are capable of sophisticated decision making. A pertinent question to ask is what areas of human employment in India are at **risk of imminent displacement**, and where will new **opportunities** be created with the advent of intelligent machines? And equally importantly, how should states be measuring employment in the age of big data?

The Future of Work session will begin by analyzing historical employment patterns in India across various sectors. It will consider possible trajectories of employment generation, both formal and informal, in response to emerging technologies and a world of data. Where will we see losses and gains and why? What kinds of complexities will future AI systems handle well, and what are likely to be **managed by** humans? Will developments in AI push job creation up the value chain and improve the overall living standards of citizens? How can the education system provide the right kind of skills for an increasingly global and connected world? Is technology likely to widen disparity or reduce it?

The output of this session will be a set of action items aimed at answering the following question: what should Indian policy makers do to ensure that India plays a major role in the emerging era of advanced technologies such as Artificial Intelligence and a world of Big Data? What kinds of measurement systems are possible in measuring employment activity with the increasing sources of data?

The session will be moderated by Vasant Dhar who is Professor at NYU's Stern School of Business and the Center for Data Science. Speakers are Jayant Sinha, Minister of State for Civil Aviation, Surjit Bhalla, Economist and author of *The New Wealth of Nations*, Amit Basole of Azim Premji University (AZU) and lead author of a recent report by AZU on Employment in India, and Kevin DeSouza, Professor at the Queensland University of Technology.



**Vasant Dhar** is a Data Scientist whose research addresses the following question: when do computers make better decisions than humans?

The research is grounded in Artificial Intelligence, Machine Learning, and data big and small. The major problem areas addressed in the research are finance, healthcare, education, business, and sports. In the financial arena, for example, his major question asks whether you should trust your money to a robot. For example, see: <http://online.liebertpub.com/doi/full/10.1089/big.2015.28999.vda>

Similar questions apply in the other arenas. For example, could computers make better teachers than humans? Could they offer valuable healthcare advice to us that experts aren't able to provide? Could they become valuable assistant coaches?

As recently as five years ago, it would have seemed preposterous to think that computers might drive cars better than humans in our lifetime yet driverless cars are here already. Computers are making more and more decisions for us, and increasingly so in areas that require human judgment. How might we leverage the rapid advances in machine intelligence in areas such as finance, healthcare, and education?

Professor Dhar teaches courses on Trading Strategies, Prediction, Data Science, and Foundations of FinTech. He also writes on IT-driven transformation such as the one currently driving education, and implications for how firms talk to customers and partners and govern data responsibly.

He has written over 70 research articles, funded by grants from industry and the National Science Foundation. He pioneered the use of machine learning for predictive modeling on Wall Street across proprietary systematic trading, risk management, and customer and salesforce management. He is a frequent speaker in academic as well as industrial forums.

Professor Dhar received his Bachelor of Technology from the Indian Institute of Technology in Delhi, and his Master of Philosophy and Doctor of Philosophy from the University of Pittsburgh.



**Kevin C. Desouza** is a Professor of Business, Technology and Strategy in the School of Management at the QUT Business School. He is a Nonresident Senior Fellow in the Governance Studies Program at the Brookings Institution and is a Distinguished Research Fellow at the China Institute for Urban Governance at Shanghai Jiao Tong University. He has held tenured faculty appointments at the University of Washington, Virginia Tech, and Arizona State University. In addition, he has held or holds visiting appointments at several institutions including the London School of Economics and Political Science, Università Bocconi, University of the Witwatersrand, and the University of Ljubljana. Desouza has authored, co-authored, and/or edited nine books. He has published more than 100 articles in journals across a range of disciplines including information systems, information science, public administration, political science, technology management, and urban affairs. A number of outlets have featured his work including Sloan Management Review, Stanford Social Innovation Research, Forbes, Businessweek, Wired, Governing, Slate.com, Wall Street Journal, USA Today, NPR, PBS, and Computerworld.



**Jayant Sinha** is the Minister of State for Civil Aviation, a Member of Indian Parliament and formerly the Minister of State for Finance. He has also been an investment fund manager and management consultant.

Jayant Sinha's prior business experience includes twelve years with McKinsey & Company as a partner in the Boston and Delhi offices. At McKinsey, he co-led the global Software and IT Services practice. He was most recently a partner at Omidyar Network. Jayant Sinha led ON's overall investment strategy and operations in India. He also spent several years as a Managing Director at Courage Capital, a global special situations hedge fund.

Jayant Sinha holds an M.B.A. with Distinction from the Harvard Business School, an M.S. in Energy Management & Policy from the University of Pennsylvania, and a Bachelor of Technology degree with Distinction from the Indian Institute of Technology Delhi.



**Amit Basole** is a faculty member at the School of Liberal Studies, and has been with the Azim Premji University since 2017. He has taught at Bucknell University and the University of Massachusetts prior to coming to APU. His research has been published in various edited volumes and in journals such as *Economic and Political Weekly*, *World Development*, *Development and Change*, *Rethinking Marxism*, *International Journal of Hindu Studies*, and *International Review of Applied Economics*. He has recently edited a book called *Lokavidya Perspectives: A Philosophy of Political Imagination for the Knowledge Age*.