

Department of Marketing



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Machine learning in healthcare: Invention of a method of invention, general purpose technology, or both?

Abstract: Recent attention to artificial intelligence is driven by advances in machine learning. This technology has potential to have a large economic impact for two related, but distinct, reasons. First, machine learning could be seen as a new method of invention. Like hybrid corn, it may increase the productivity of the innovation process. Second, machine learning could be seen as a general purpose technology. Like electrification, it may have a substantial impact on a wide variety of industries. It may also be both. It could increase the productivity of the innovation process across a wide variety of industries. Using data from hundreds of thousands of online job postings in healthcare, we examine the types of organizations that have looked to hire machine learning expertise, and the nature of those positions. We find that healthcare organizations are hiring machine learning expertise for research in large numbers. We also have some preliminary results on differences in coinvention costs for research and non-research jobs, and for jobs that require coding expertise or non-coding expertise.