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The Impact of Artificial Intelligence on the Labor Market

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How will artificial intelligence affect workers? We develop a new method to predict the impacts of a technology on occupations. We use the overlap between the text of job task descriptions and the text of patents to construct a measure of the exposure of tasks to automation. A model reveals that the impact of task automation on occupation demand is theoretically ambiguous. We therefore first apply our method to historical cases such as software and industrial robots. We establish that occupations we measure as highly exposed to previous automation technologies saw large declines in employment and wages over the relevant periods. We use the fitted parameters from the case studies to predict the impacts of artificial intelligence. We find that, in contrast to previous technologies, artificial intelligence is projected to negatively impact high-skill occupations.