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Enhancing Data Science Education via Artificial Intelligence JAMES DELEON, AMIR SHAHMORADI, WEISHU DENG, University of Texas at Arlington — In today's job market, the increasing demand for college graduates who are trained in data science spans every field of science. Therefore, university undergraduate and graduate programs must be responsive to align their curricula with the dynamic needs of the job market. However, the data scientist title is relatively new and formal data science competencies are yet to be defined. In this experiment, job descriptions from common job-posting websites are extracted algorithmically and analyzed to discover a correlation between what skills a particular field of jobs require, and the skills offered by undergraduate and graduate syllabi at the University of Texas. It will be described the determination to discover what these data science technical and soft skill competencies are by analyzing data from national job postings, along with systematically investigating how the pattern of required skills varies by domain of science, and characteristics of the job descriptions. Given such insights, programs can be prepared to identify gaps between academic preparation and the skills employers seek by identifying data science competencies to become aligned with the rapidly changing demands of the job market.

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