

Research Article

Artificial Intelligence, Occupation, and Skills Pattern: An Empirical Study on Legal Professionals

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Abstract

Traditional employment patterns and skill requirements are changing as a result of the legal profession's adoption of artificial intelligence (AI). This empirical study looks at how legal professionals are affected by the deployment of AI, with an emphasis on efficiency, automation, and changing workplace dynamics. *Objective:* To investigate the ways in which artificial intelligence is changing the responsibilities and skill sets needed in the legal profession, with a focus on discovering new capabilities and changes to classic legal workflows in a tech-driven legal ecosystem. A Google Form-based survey was used to gather primary data from 50 legal professionals in various disciplines, experience levels, and geographic areas. *Results* indicate that although AI increases efficiency and simplifies common legal activities, it also calls for specific knowledge of data-driven decision-making, digital competency, and AI ethics. Results indicate that although, concerns about changes in employment and the reorganization of legal positions are also examined in the study. Law appears to be the most affected profession according to respondents aged 26-35, making up 76.9% of their responses. AI has significantly impacted the legal profession, with 72% of respondents acknowledging transformations in key legal skillsets. The most affected area appears to be *research on precedents* (32%), highlighting how AI-powered tools streamline legal research and case law analysis.

Keywords

Artificial Intelligence, Legal Professionals, Technologies, Digital Competencies and Ethics, Occupation Pattern, Skillset

1. Introduction

The idea of artificial intelligence was first presented at the 1956 Dartmouth Conference. The idea refers to the ability of machines to mimic human behaviours and carry out tasks in an intelligent manner by simulating human activity. AI is a broad term for useful and adaptable technology that can be used in many different spheres of social production. This new science and technology have the potential to greatly increase production efficiency. AI technology is a new scientific subject that has the potential to greatly increase production efficiency in a variety of social production domains.

Another interesting argument by Trajtenberg suggests that technology can increase human capital accumulation in industries related to healthcare, education and law, particularly for young individuals with good educational backgrounds and technical expertise. However, for labour groups with lower wage rates in replaced industries, the higher cost of human capital reallocation may exacerbate the employment crisis. By analysing the creation and substitution impacts brought about by technological development, as well as the demographic transmission mechanism and philosophical reflections in the

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non-economic mechanism, [7] investigate the economic impact of technological advancement on labor force employment. Using time-series data, [3] empirically examines the relationship between skill-biased technology growth and shifts in the labor force structure. The study shows that technological development can significantly increase businesses' need for qualified workers.

AI is truly a marvel of human intelligence. From the simple invention of wheels, we have come to a stage where AI (a human made product) is able to do almost any task provided to it. AI helps one from doing basic math problem to self-drive cars, from creating summaries to answering in the blink of an eye. In short, it does basically any task of the aforementioned nature. This type of AI is known as narrow AI. Then, we have another type of AI which is run on big supercomputers, can multitask and provide solutions to a variety of complex problems in an instant and even surpass human intellect. These AIs are known as AGI or Artificial General Intelligence. These AIs are so powerful that even space agencies use them to compute complex data and schedule their flight path. Therefore, the development of AI technology has opened up new possibilities with the arrival of the big data era and information technology breakthroughs like cloud computing and 3D printing.

AI has been categorized as the 'young person's tool'. This means that AI is actively being used by the younger half of the human population for all types of work. This work can also be termed as 'occupation'. Humans have always used skills to carry out their occupation. The world has functioned like this for millennia. But with AI becoming a new stakeholder in the lives of the people who are expected to propel humankind to the next level, a few questions are raised. Firstly, how are the various professional occupations being affected by AI? This question focuses on the changes happening on the occupational side of society and shows the changes taking place. Secondly, is AI killing skills for the next generation? This question focuses on how the skills passed down from generation to generation and newer skills obtained from advancements on previous skills are starting to disappear in this new era of civilization.

Literature Review

Understanding, thinking, analysing, interpreting, inferring, judging are all skills that give our species intelligence. But these skills are no longer exclusive to humans [12]. These skills are used by AI, a creation of humans. AI performs human-like tasks by interpreting and analysing data that is available to it. Traditionally in the workspace, AI driven systems were used for a variety of routine tasks such as data entry, customer services, accounting, file/document management. However, with the advent of generative AI, AI is now capable of generating new content or data, rather than just processing and analysing it [11]. In this new era of AI, the demand for workers with cognitive skills is on the rise especially for skills such as processing complex information, critical thinking, decision making and continuous learning [6]. The current focus of employer is on upgrading to or retaining skills in their workforce, which highlights that the

period of transition of digitization should go smooth and not have a huge impact on employment [1]. Those who are employed may see an increase in their efficiency and rewards, but it may also lead to other contradictory results such as effect on well-being and security of the employee. Technology should not be allowed to "Dehumanize" or "Control" our lives, but it could change or replace basic interactions necessary for the development of skills or well-being of humans [5]. The application of AI driven robots is a concrete reflection of the integration of AI technology and industry, and its widespread promotion and popularization [15].

Still, those who held positions that are prone or susceptible to change may be a bit behind in these technological "chops". The increase in technological development and changes in employment requirement can easily leave behind the rate at which an employee picks up a new skill [14]. Worker with higher level of education and skills are more likely to cope with and adapt to the changing market conditions and will have a better chance of survival in a world where new employment will come up due to AI [16]. A study shows the impact of AI on old sectors like delivery executives being replaced by drone deliveries, content writers replaced by generative AI, telemarketer overtaken by robot caller [8]. A study concluded that AI performance had a significant impact on job engagement, employee service performance, which related to employee job appraisal significantly [13]. AI and job performance were significantly mediated by job engagement and service performance. The impact of AI on job displacement and employment opportunities is double sided. It brings to the table numerous advancements such as increased efficiency, cost saving, faster decision making, but on the other hand it leads to job displacement particularly for roles of routine and repetitive tasks which do not require much skill or even if it did, can be replaced by AI driven machinery [2]. Education spending has a favourable effect on the employment of people with low-level and high school skills, but it has no discernible effect on the employment of those with medium- and high-level skills. This is since literacy is directly impacted by education spending, and China has effectively achieved universal, nine-year compulsory education. In this regard, companies are using AI more and more for cost-cutting and development, which is causing organizational changes [9]. The effects of AI adoption on workers' job outcomes, however, are yet largely unknown. Job crafting, the process by which workers customize their job responsibilities to better fit their interests, abilities, and values, looks to be a crucial adaptability mechanism in this dynamic AI-driven work environment [4]. The rising use of robotic process automation (RPA) in accounting in the post-pandemic era has demonstrated AI's transformative potential [10].

2. Methods of Research

2.1. Design of Research

This study examines the effects of AI on legal vocations and skill patterns utilizing a survey-based empirical approach and a quantitative research design with aspects of qualitative analysis.

2.2. Method of Data Collection

A Google Form-based survey was used to gather primary data from 50 legal professionals in various disciplines, experience levels, and geographic areas. The survey included a variety of:

- 1) Closed-ended questions (multiple-choice, Likert scale) to measure the uptake of AI and skill shifts.
- 2) Open-ended inquiries to get qualitative information about how AI is viewed in legal work.

2.3. Method of Sampling

Purposive sampling is the sampling technique.

The selection process focused on attorneys who work directly with AI-powered legal tools (such as predictive analytics and contract review software).

2.4. Sample Size

Lawyers from a variety of legal specialties, including corporate law, litigation, intellectual property, etc., make up the

sample.

2.5. Methods of Data Analysis

- 1) Descriptive statistics: Mean, Median, and Mode to evaluate trends in AI use. A frequency distribution to assess how common AI use is in legal practice. To compare the adoption of AI across specializations and expertise levels, the research uses cross-tabulation.
- 2) For open-ended responses, thematic analysis is used to identify recurring themes on how AI is affecting legal practice, skill development, and professional issues. Coding qualitative replies to identify recurrent themes on artificial intelligence in legal work.

3. Results and Analysis

The first question I sought to answer was of all the employed professionals (including the differences in their ages and experiences) who participated in this survey, if they used AI at all in their professional lives and if so, then how often do they use it. The results have been tabulated below.

Table 1. Cross Tabulation between Age and Usage of AI.

Age of Respondents			Usage of AI				
			Weekly	Fortnightly	Daily	Never/No Usage	Total
Age	18-25	Count	2	2	0	0	4
		Row N%	50.0%	50.0%	0.0%	0.0%	100.0%
	26-35	Count	11	5	7	2	25
		Row N%	44.0%	20.0%	28.0%	8.0%	100.0%
	36-45	Count	2	3	4	5	14
		Row N%	14.3%	21.4%	28.6%	35.7%	100.0%
	Above 45	Count	5	0	2	0	7
		Row N%	71.4%	0.0%	28.6%	0.0%	100.0%
	Total	Count	20	10	13	7	50
		Row N%	40.0%	20.0%	26.0%	14.0%	100.0%

Source: Primary Survey

The above survey data on AI usage across different age groups among legal Professional highlights that the 18-25 age group has a small sample size (4 respondents), with an even split between weekly and fortnightly AI usage. No one in this group reported daily or no usage. The 26-35 group (25 respondents) has more varied usage patterns, with 44% using AI weekly, 28% using it daily, and 8% reporting no usage. The

36-45 group (14 respondents) shows a higher percentage of non-users (35.7%), while 28.6% use AI daily. The above 45 group (7 respondents) is primarily weekly users (71.4%), with 28.6% using AI daily, and no fortnightly or non-users. Overall, weekly usage seems most common (40%), followed by daily usage (26%), and then fortnightly usage (20%). Only 14% of respondents reported never using AI.

Table 2. Bivariate between Age and Profession.

Age of Respondent		Which Profession respondent feels has been affected the most by AI						
		Academia	Law	Corporate	Finance	Medical Practitioners	Engineering	Total
Age	18-25	Count	0	0	2	2	0	4
		Column N%	0.0%	0.0%	15.4%	40.0%	0.0%	8.0%
	26-35	Count	0	10	7	0	8	25
		Column N%	0.0%	76.9%	53.8%	0.0%	66.7%	50.0%
	36-45	Count	7	3	2	0	2	14
		Column N%	100.0%	23.1%	15.4%	0.0%	16.7%	28.0%
	Above 45	Count	0	0	2	3	2	7
		Column N%	0.0%	0.0%	15.4%	60.0%	16.7%	14.0%
	Total	Count	7	13	13	5	12	50
		Column N%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Primary Survey

The above table shows how different age groups perceive the impact of AI across various professions. The most affected ones are categorised as follows *Law* appears to be the most affected profession according to respondents aged 26-35, making up 76.9% of their responses. Followed by *Finance* is perceived as heavily impacted by AI among the 18-25 (40.0%) and the *above 45* (60.0%) age groups. *Academia* is exclusively mentioned by 36-45 year-olds (100.0%), suggesting that more experienced professionals in this field feel AI's

impact. Another set of Professionals affected are *Medical Practitioners*, who are notably in the 26-35 age range (66.7%), likely reflecting advancements in AI-driven diagnostics and healthcare automation. *Corporate* is more evenly distributed across age groups, showing significant concern in 26-35 (53.8%) and *Above 45* (15.4%). *Engineering* has 0% responses, indicating it may not be perceived as directly impacted by AI in the same way as other fields.

Table 3. Bivariate between Impact on Legal Skill Set.

Has there been an impact on legal Profession		Legal Skillset Majorly Transformed				Total
		Summarising case facts	Proofreading Documents	Drafting standard documents like contracts	Research on Precedents	
Yes	Count	9	2	9	16	36
	Subtable N%	18.0%	4.0%	18.0%	32.0%	72.0%
No	Count	2	3	0	9	14
	Subtable N%	4.0%	6.0%	0.0%	18.0%	28.0%
Total	Count	11	5	9	25	50
	Subtable N%	22.0%	10.0%	18.0%	50.0%	100.0%

Source: Primary Survey

The data suggests that AI has significantly impacted the legal profession, with 72% of respondents acknowledging

transformations in key legal skillsets. The most affected area appears to be *research on precedents* (32%), highlighting how

AI-powered tools streamline legal research and case law analysis. Additionally, *summarizing case facts* (18%) and *drafting standard documents like contracts* (18%) are notably influenced, which aligns with AI's ability to automate document generation and content summarization.

Interestingly, *proofreading documents* seems to have the

least perceived impact, with only 4% of respondents seeing major AI-driven changes in this area. However, 28% of respondents feel legal skills remain largely unaffected, suggesting that certain aspects of the profession still require human expertise and judgment.

Table 4. AI and Change in the Legal Occupation Pattern.

Use of AI by Professionals		Change in Legal Occupational Pattern due to this use					
		Automation	Efficiency	Better Work Environment	Decrease in jobs	No clue	Total
Weekly	Count	2	7	6	2	3	20
	Row N%	10.0%	35.0%	30.0%	10.0%	15.0%	100.0%
Fortnightly	Count	0	7	3	0	0	10
	Row N%	0.0%	70.0%	30.0%	0.0%	0.0%	100.0%
Daily	Count	2	6	2	3	0	13
	Row N%	15.4%	46.2%	15.4%	23.1%	0.0%	100.0%
Never/No Usage	Count	7	0	0	0	0	7
	Row N%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Total	Count	11	20	11	5	3	50
	Row N%	22.0%	40.0%	22.0%	10.0%	6.0%	100.0%

Source: Primary Survey

The data shows how AI usage among professionals affects occupational patterns. This table provides insights into automation, efficiency, workplace improvements, and job reduction trends across different AI usage frequencies. *Efficiency* is the dominant factor (40%) across all usage levels, especially among fortnightly users (70%). *Better work environments* (22%) are another noticeable benefit, with weekly users reporting this frequently (30%). *Automation* (22%) is present but varies significantly weekly usage (10%), daily usage (15.4%), and never/no usage (100%, meaning automation might be more relevant to those who don't use AI). Job decreases (10%) are primarily noticed by daily users (23.1%). *Uncertainty* (6%) about AI's impact is relatively low but present among weekly users (15%).

4. Conclusion

This research paper shows the drastic changes in occupation and profession due to the advent of AI. This rapid influence of AI in professions of all manner is positive in almost all aspects. It reduces human interactions and hence reduces the dependence of organization on humans. Tasks are being mechanized left and right, traditional jobs like working on

assembly lines are going extinct and new, skill specific jobs are emerging. In this highly competitive world, AI has become a boon as well as a bane. In this research paper, the impact of AI on the legal profession has been studied. A profession that once relied solely on people is now becoming digitized. This has caused routine and repetitive tasks like drafting contracts, summarizing case facts and researching precedents to become almost entirely dependent on AI. With all these changes, the increase in efficiency is what most legal professionals believe has been caused by AI. This is seconded by having a better work environment with employees at relative ease as they don't have the pressure of completing routine and repetitive tasks anymore. To conclude, this research paper has highlighted the effects and changes caused by AI in the legal profession and the holistic view of legal professionals on the advent of AI.

Abbreviations

AI Artificial Intelligence

Author Contributions

Anirudh Jha is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

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