

AI as a threat?: Evidence from Reddit

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Abstract

This paper investigates profession-specific factors that shape public dual perception of Artificial Intelligence in the workplace - apprehension and enthusiasm - by using data from 72 profession-based forums on Reddit. The occupations vary in salary, skill profiles, degree requirements, and particularly, levels of AI exposure, from actuaries to firefighters. Quantitative analysis of textual data from 2009 to 2024 reveals a twofold narrative: while many express concerns about job displacement, professionals also increasingly incorporate AI into their work, emphasizing its productivity-enhancing potential and a general willingness to adapt. Regression analysis results show that professionals who frequently use mathematical and problem-solving skills in their work exhibit less concern about AI-induced displacement; professions centered on teaching and selling skills engage more in discussions on AI applications. Pivotal technological milestone like the release of ChatGPT also affects public perception, supported by evidence from Synthetic Control Method.

1 Background

Since its development and refinement in the early 2000s, Artificial Intelligence has fueled multiple innovative endeavors across diverse fields. It advances the development of voice assistants, automatic driving, and image recognition systems. Beyond practical applications, AI has also demonstrated its creative potential through composing music, generating art, writing poetry, and coding.

Public awareness of AI's potential remained limited until the release of user-facing products like ChatGPT in November 2022. This freemium AI chatbot democratized access to advanced AI capabilities, igniting both enthusiasm about its potentials and growing concerns about the job-displacement threats. On the one hand, users have embraced AI for problem-solving skills and integrated it into both daily and professional routines. AI has been offering advice for humans on cooking recipes, providing counseling support, automating writing processes, assisting with coding. On the other hand, like previous waves of automations that displaced workers while creating new jobs, AI has sparked fears of redundancy and obsolescence in the workplace. Headlines of AI-induced

mass layoff across industries has been on the rise. However, unlike earlier forms of automation, which primarily affected low-skilled workers performing routine tasks (Frey and Osborne 2017), AI exerts a broader influence on high-skilled labor. This is due to the significant overlap between the task components of high-skilled professions and AI's capabilities (Felten, Raj, and Seamans 2021).

The study argues that task-specific characteristics and the heightened tangibility of AI after ChatGPT's release drive both concerns about job displacement and proactive efforts to integrate AI into daily work. This dual focus provides an understanding of how AI impacts the labor market and individual behaviors.

2 Literature Review

2.1 The Duality of AI

The anxiety and fear of machines replacing humans is not recent phenomenon. As early as the late 16th century, William Lee, the inventor of the knitting machine, sought a patent from Queen Elizabeth I. She declined, fearing that the machine would lead to widespread unemployment among her subjects (Britannica 2024). Since then, technological advancements have rendered many jobs obsolete while simultaneously creating new professions. However, the pace at which how fast technology is developing today introduces significant challenges. While it took over 60 years from the creation of the first AI program capable of basic problem-solving (the Logic Theorist, 1956) to defeating human champions in complex games (AlphaGo, 2016), it took only 6 years from that milestone to ChatGPT-3 which is capable of advanced academic writing, writing codes and music (GPT-4, 2023). This acceleration leaves workers with little time to adapt and acquire the skills for emerging roles

The duality of technology—as both a productivity-enhancing tool and a job-displacement threat—has captured the attention of economists for centuries. Ricardo (1895), in *Principles of Economy and Taxation*, initially claimed that technology would increase productivity without threatening labor. However, in his later work, *On Machinery* (Hollander 2019), he revised this stance, acknowledging legitimate concerns for workers' livelihoods threatened by automation. This tension between productivity gains and job security has only intensified with AI.

Acemoglu and Restrepo (2018) provide a theoretical framework that encapsulates this duality, introducing the concepts of **displacement effects**—where AI reduces labor demand by substituting capital for human input—and **reinstatement effects**, wherein automation creates new tasks that rely on human labor. The model underscores that automation alters the task structure of production, favoring tasks where machines have a comparative advantage while potentially introducing new tasks, given the proper economic counter forces. The framework also warns of a potential mismatch between the skills demanded by new AI-driven tasks and the existing workforce's capabilities, which could exacerbate inequality and slow labor market adjustments.

Empirical studies lend robust support to AI’s displacement effects. Acemoglu et al. (2022) and Choi and Leigh (2024) document how AI adoption affects job vacancy patterns, reducing demand for certain roles while reshaping skill requirements. On a macroeconomic scale, Acemoglu (2024) argue that while AI delivers modest productivity gains, it also risks widening the divide between capital and labor, with automation benefiting capital disproportionately.

A consistent finding across the literature is that the impact of AI differs by skill level and occupation. Eloundou et al. (2023) find evidence of a negative correlation between AI exposure and automation exposure, suggesting that different industries and jobs experience these effects to varying degrees. High-skilled, white-collar jobs appear to be most exposed to AI (Webb 2019), (Eloundou et al. 2023), (Felten, Raj, and Seamans 2021), (Zarifhonorvar 2023). This challenges earlier findings about automation, such as those in Frey and Osborne (2017), which classified high-skilled industries and occupations as “safe” from computerization.

On the productivity-enhancing side, a body of work highlights the significant potential of AI to drive economic growth. For example, Gao and Feng (2023) find that integrating AI increases firms’ total factor productivity by 14.2% through process optimization. Similarly, Damioli, Van Roy, and Vertesy (2021) document productivity gains linked to AI patenting activities, particularly in small and medium-sized enterprises. At the macroeconomic level, Furman and Seamans (2019) and Acemoglu and Restrepo (2018) agree that AI and robotics can be drivers of economic growth through productivity boosting, at the same time, express cautions about the labor market disruptions and exacerbating inequality. Furman and Seamans (2019), in particular, emphasize that these disruptions disproportionately affect certain occupations and industries, highlighting the uneven distribution of AI’s benefits.

2.2 AI Exposure Index

Since an occupation’s task components dictate how AI might effect the said occupation’s structure of production and labor market, different professions would have different level of exposure to AI, depending on their task components. An AI exposure index, developed by Felten, Raj, and Seamans (2021), provides a systematic way of examining to which extent each occupations are at risk of being replaced by Artificial Intelligence. There are ten AI applications, including abstract strategy games, real-time video games, image recognition, visual question answering, image generation, reading comprehension, language modeling, translation, speech recognition, and instrumental track recognition.

Felten, Raj, and Seamans (ibid.) matched those applications to 52 human skills, including but not limited to inductive reasoning, oral expression, arm-hand steadiness. They calculate ability-level exposure as followed:

$$A_{ij} = \sum_{i=1}^{10} x_{ij}$$

i denotes ten AI applications while j denotes occupational ability. The ability exposure is calculated by summing the application-ability related score, x . Using the ability exposure score, AIOE index is obtained by:

$$AIOE = \frac{\sum_{j=1}^{52} A_{ij} L_{jk} I_{jk}}{\sum_{j=1}^{52} L_{jk} I_{jk}}$$

L_{jk} denotes prevalence and I_{jk} denotes importance of the ability for the occupation. Abilities that are integral parts of the jobs would have higher prevalence and importance score. This allows researchers to discern differences in AI exposure between jobs that might be similar to each other in terms of tasks but different of the distribution of the tasks.

Language Modelling exposure , is an adjacent index developed by Felten, Raj, and Seamans (2023). The index is based on the same intuition, conceptualization of the AIOE. The key different is that instead of examining the Ability-exposure across ten AI applications, the researchers only focus on Language Modelling by modifying the original Ability-exposure score as followed:

$$A_{ij} = \sum_{i=1}^{10} a_i x_{ij}$$

a_i is the weight for each application of AI. In this case, it is set to 0 for all applications other than language modelling, which is set to 1. The language Modelling exposure of each occupation is calculated in the same way as the AI exposure index.

2.3 Risk Perception

Subjective risk perception plays a critical role in shaping individual actions, policy demands, and societal attitudes. Research identifies several factors influencing how people perceive risks, including tangibility and heuristics, with knowledge playing a supporting role by aligning perceptions closer to expert assessments (Savadori et al. 2013). Tangibility strongly affects risk perception, as abstract risks are often underestimated compared to concrete ones. Research shows that concrete thinking leads to higher risk perception, whereas abstract thinking can result in underestimating risks (Lerner et al. 2016). Before ChatGPT, AI was largely abstract for most people. With its integration into daily life, AI has become tangible, potentially heightening public awareness and altering perceptions of AI risks.

Heuristics, like the availability heuristic, also significantly influence how risks are perceived. Subjects who can recall a flooding event perceive themselves more at risk of flooding than people who cannot (Siegrist and Gutscher 2006). These cognitive shortcuts amplify the salience of certain risks, shaping subjective perceptions in meaningful ways.

These factors—tangibility, heuristics, and knowledge—become especially pertinent in the context of job insecurity. Perception of job insecurity, employability, and irreplaceability are critical factors shaping job markets (Balz and Schuller 2021). Technological advancements, particularly the rise of automation and robotics, significantly alter these perceptions, often exacerbating job insecurity. Surveys from the US and Europe reveal that workers more exposed to technological substitutes report heightened job insecurity, leading to burnout and workplace incivility (Nam 2019) (Yam et al. 2023). These empirical findings underscore how heuristic and tangibility influence the perception of job insecurity.

Based on the literature review, the release of ChatGPT, which would increase the tangibility of threats. The release of ChatGPT, which serves as an anchor, might reinforce the sense of risk induced by releases of later models of ChatGPT like ChatGPT4.

2.4 Addressing the gap in the literature

Building on the intersection of economic models of task-based dynamics and risk perception theories, this study contends that the release of ChatGPT heightened the tangibility of AI's risks and its accessibility, amplifying public awareness and interest.

Numerous studies have utilized censuses and surveys to examine respondents' opinions and attitudes toward automation and job insecurity. One of the key advantages of utilizing Reddit as a data source lies in its ability to provide real-time, dynamic insights. While census and survey-based research has contributed valuable findings on technological development, these methodologies often struggle to capture the rapid changes inherent in fields like AI. Social media platforms, including Reddit, offer data that is not only more current but also less prone to biases typically associated with survey research, such as social desirability bias. This makes Social Media a particularly useful tool for studying evolving perceptions and behaviors in relation to technological advancements.

3 Empirical Strategy

3.1 Reddit

Reddit is a social media platform that hosts 138000 active thematic communities, also known as Subreddits. These communities are organized around specific topics, including various professions. For instance, r/Professors serves as a forum for professors to discuss topics related to academia and their profession. The forum-like structure of Reddit provides researchers with a unique opportunity to observe how individuals from different professions engage in discussions and express their opinions on pressing issues within their fields, including the impact of AI. This organic exchange of ideas makes Reddit an invaluable resource for studying professional attitudes and perceptions towards AI. Taking

advantage of Reddit’s structure, I collected data from possible job forums to examine the insights from Redditors of different professions.

Various studies, across multiple disciplines ranging from Political Science (De Francisci Morales, Monti, and Starnini 2021), Computational Social Science (Hubner et al. 2021), (Rio-Chanona et al. 2023), to Economics (Long et al. 2023), (Hu et al. 2021), have utilized Reddit to study political communication, financial phenomena, and the interrelationship among various socioeconomic factors.

Demographics According to Statista (Statista 2024), by 2024, Reddit had reached 505 million users, also known as Redditors, 150.7 million of whom were daily active users. Approximately 44% of these users fall within the age range of 18–29 years. Moreover, over 60% of Reddit users are male, and nearly half of Reddit’s traffic (48.46%) originates from the United States. In summary, the average active Reddit user is young, male, and American. These demographic characteristics are not representative of the global population, particularly in terms of age, gender, and national background, introducing potential biases into the sample. For instance, younger individuals may exhibit greater tech savviness, adaptability, and optimism toward new technologies compared to older generations (Weinberg 2004). As a result, any optimism observed in the study’s findings may stem more from Reddit’s demographic composition than from the broader population’s attitudes.

Gender introduces another potential source of bias. Women often encounter unique challenges in the job market, such as the glass ceiling and hiring biases (Chan and Wang 2018), which may shape their perspectives on AI advancements differently from men. These factors suggest that women might approach the topic of AI with more caution or skepticism due to the unequal opportunities they face in professional environments. Therefore, the predominantly male user base of Reddit could skew the overall sentiment captured in the data.

Like many social media-based studies, this research is limited by the skewed demographic composition of its user base. Similar trends are observed on other platforms like Twitter, where young men also account for a significant proportion of users. Consequently, while Reddit provides valuable insights into professional discourse, any claims made in this study should be generalized to the broader population with considerable caution, recognizing the inherent biases of the platform’s user demographics.

Data collection I mapped the available Subreddits to the O*Net database, which includes a comprehensive list of 700 occupations. Using this mapping, I conducted API calls with the keywords "ChatGPT", "AI", "Copilot", "Machine Learning", "Claude", "Gemini" for each Subreddit. This API call is equivalent to searching "AI" or "ChatGPT" and other keywords in each Subreddit. The data spans from 2009 to 2024 and is collected from 72 Subreddits. For each post, the dataset includes the title, content, date, upvote ratio, number of upvotes, and the unique identifier or URL of the post. Although it is technically possible to retrieve usernames, the anonymous nature of Reddit limits the amount of

useful information that can be derived about individual posters. Below is a non-exhaustive list of jobs and their corresponding Subreddits. The complete list of mapped occupations and Subreddits is available in the appendix.

Table 1: Mapping of Jobs and their associated Reddit

Jobs	Subreddits
social workers	r/socialwork
authors	r/authors4
bio-engineers	r/bioengineering
mechanical engineers	r/MechanicalEngineering
Architects	r/Architects
electrical engineers	r/ElectricalEngineering
journalists	r/Journalism
civil engineers	r/civilengineering
social scientists	r/socialscience
lawyers	r/law
sociologists	r/Sociology
political scientists	r/PoliticalScience
marketing associates	r/marketing
psychologists	r/therapists

After collecting the data, I performed a filtering process to remove spam and unrelated posts. Reddit’s search engine is not optimized for such tasks. The API calls often retrieve a considerable number of irrelevant posts. To ensure the relevance of the dataset, I filtered the posts to include only those that contain at least one of the following keywords: "AI," "ChatGPT," "Artificial Intelligence","GPT" or "Copilot". This filtering process helps narrowing the focus to discussions genuinely related to the research topic, enabling a more accurate analysis of AI-related discourse across Subreddits. Since many calls overlap in their content, the dataset also included duplicate posts retrieved from multiple queries. To address this, I implemented a filtering process to identify and remove duplicate entries, ensuring each post appeared only once in the final dataset.

I also included Subreddits with no AI-related posts in the dataset. The absence of AI-related posts is, in itself, an indicator of the level of interest and engagement within those groups. This lack of discussion may suggest that the Redditors in these Subreddits are neither concerned about nor particularly interested in AI. Including these groups provides a more comprehensive view of engagement levels, allowing for comparisons between Subreddits with high AI-related activity and those with none, which can yield valuable insights into varying attitudes toward AI across different professions and communities. After completing the data cleaning process, including filtering out spam, unrelated posts, and duplicates, the final dataset comprises 3,090 unique posts.

3.2 Natural Language Processing

Natural Language Processing (NLP) is a quantitative approach to discourse analysis, which lends itself to analysing big text data, including but not limited to social media posts, political texts, books, news outlet. All the listed data source contain various valuable data that can be valuable revealing public opinions, behaviors, political climate, which is too important to overlook. However, since traditional qualitative method might come short when it comes to analysing such copious amount of text data, social scientists have been leveraging the Machine Learning tools to mine data and further research potential.

Use of AI for NLP One novel aspect of this paper is the use of ChatGPT for content analysis. ChatGPT, powered by GPT (Generative Pre-trained Transformer), goes beyond the traditional approaches of Natural Language Processing (NLP), which often rely on simplistic sentiment analysis—categorizing text as positive, negative, or neutral based on the frequency of sentiment-laden words. In contrast, GPT provides a more nuanced understanding of textual data. It can identify context-specific sentiments and thematic concerns, enabling it to discern job-related apprehension about AI, which is the core focus of this study.

Through its advanced capabilities, such as understanding contextual subtleties, detecting implicit meanings, and interpreting specialized discussions, GPT accurately captures the constructs relevant to this research. By doing so, ChatGPT allows for precise measurement of how professionals perceive AI, particularly the apprehension tied to its impact on job security and productivity. This ensures that the analysis aligns closely with the study’s objectives and provides insights that traditional NLP methods might overlook (Mathew and Bindu 2020; Kheiri and Karimi 2023; Mishev et al. 2020).

3.3 Quantitative Analysis

3.3.1 Variables

Dependent Variables The main dependent variables in this study are *Using* and *Concerns*. The selection of these two variables reflects the duality of AI as both a potential threat (Frey and Osborne 2017) and a powerful tool for enhancing professional tasks (Gao and Feng 2023) (Al Naqbi, Bahroun, and Ahmed 2024). This duality lies at the core of the AI debate: is AI going to substitute human labor or complement it? (Lichtenthaler 2018) (Wang and Lu 2025). A manual review of AI-related discussions on Reddit further supports this dichotomy, as Redditors frequently express apprehension about AI while simultaneously demonstrating enthusiasm for integrating it into their work.

An additional dependent variable, *Learning*, is incorporated to analyze discussions surrounding the acquisition of AI-related skills or the pursuit of further education in fields such as AI and machine learning. This variable aligns with findings by Acemoglu et al. (2022), which highlight the rise of AI-focused occupations and shifting skill demands driven by technological adoption. As firms

increasingly require specialized AI-related skills, individuals might respond by investing in education and adapting their abilities to align with emerging market demands. *Learning* captures these potential proactive efforts (if any), reflecting how workers navigate and prepare for the evolving challenges of an AI-driven economy. The variables are defined as follows:

Table 2: Dependent Variables

Variable	Definition	Value
Concerns	if the text expresses concerns/worries how AI might change their job prospects or replace them or lower their bargaining power	1 if Yes and 0 if No.
Using	if the text talks about using/employing AI/ChatGPT for their job.	1 if Yes and 0 if No.
Learning	if the text talks about learning more about AI to prepare for their jobs or pursue an degree in AI	1 if Yes and 0 if No

Traditional natural language processing (NLP) libraries often categorize posts as positive, negative, or neutral by quantifying the presence of sentiment-laden words. While these scales can provide general insights, they may lack the specificity required for a study that focuses on distinct emotions tied to particular topics, in this case, perceptions of AI. In contrast, the dependent variables in this study are bespoke to the research objective, allowing for a more nuanced exploration of AI-related concerns, utility, and learning aspirations. By analyzing these variables, the study aims to uncover more precise insights into how individuals perceive and engage with AI in their professional lives.

I use ChatGPT API to identify if the theme is present in each post and return binary result indicating if the topic is mentioned in the post or not. The reason behind the choice of using binary grading instead of scoring is the lack of transparency of ChatGPT and AI in general. As discussed in previous section, AI excels at identifying the existence emotions, tones, topics in provided corpus. However, because the rationale behind AI’s decision to assign certain score to certain text is unknown, an AI scoring system would not comply with the rigorous standard of a research paper. For a binary variable, since I can dictate how AI pick up through commands and prompts, the process is more transparent and the results are more reliable.

Independent Variables Given the hierarchical nature of the dataset, there are two levels of independent variables: post-level independent variables and group-level (Subreddit-level) independent variables.

The post-level independent variables include temporal markers corresponding to the time at which the posts were made. These are captured by the variables *after-GPT* and *after-GPT4*. The variable *after-GPT* takes a value of 1 for posts made after November 2022, marking the release of ChatGPT.

Similarly, *after-GPT4* assumes a value of 1 for posts made after March 2023, when GPT-4 was introduced. These temporal variables help to account for shifts in discourse patterns following the introduction of these transformative and powerful AI models. As discussed, technologies like ChatGPT make AI more tangible and accessible to the public, potentially heightening perceived risks by transforming AI from an abstract concept to a daily reality. Furthermore, high-profile releases such as GPT-4 may activate availability heuristics, amplifying concerns about AI-driven job displacement.

Group-level independent variables pertain to the occupation-related characteristics of the Subreddits. *Salary* data for various occupations was obtained from the U.S. Bureau of Labor Statistics.

Additional group-level variables include *age* and a range of task-related metrics, such as *math1*, *cooperate*, *teach*, *sell*, *communicate*, *dexterity*, and *prob.solv1*, sourced from Nedelkoska and Quintini (2018). The *age* variable represents the average age of respondents within the same occupation, while the task variables indicate the frequency with which the respondent have to perform specific tasks in the respective jobs. These task variables, named in a self-explanatory manner, provide insights into the functional demands of each occupation. These task variables provide insights into the functional demands of each occupation and are rooted in Acemoglu and Restrepo (2018)'s theoretical framework, which emphasizes the importance of task-based dynamics in understanding the impacts of automation. Specifically, the model highlights how the displacement and re-instatement effects of automation depend on the nature of tasks, with certain task types being more susceptible to automation.

By including these variables, the analysis links task-specific metrics to occupation-level exposure to AI, complementing both economic and risk perception perspectives on the labor market impacts of emerging technologies.

Further details regarding the group-level independent variables and their derivation are provided in the appendix.

3.3.2 The Argument

This study argues that perceptions of AI are shaped by two key factors: the tangibility of AI advancements introduced by ChatGPT's release and the nature of tasks performed in different occupations. Temporal markers, such as *after-GPT* and *after-GPT4*, capture the immediate and evolving effects of these technological milestones, while task metrics reflect the significance of different occupational tasks. Together, these variables serve as the instruments for testing how shifts in AI visibility and task-composition influence public perceptions.

4 Descriptive Results

4.1 Overall Interests

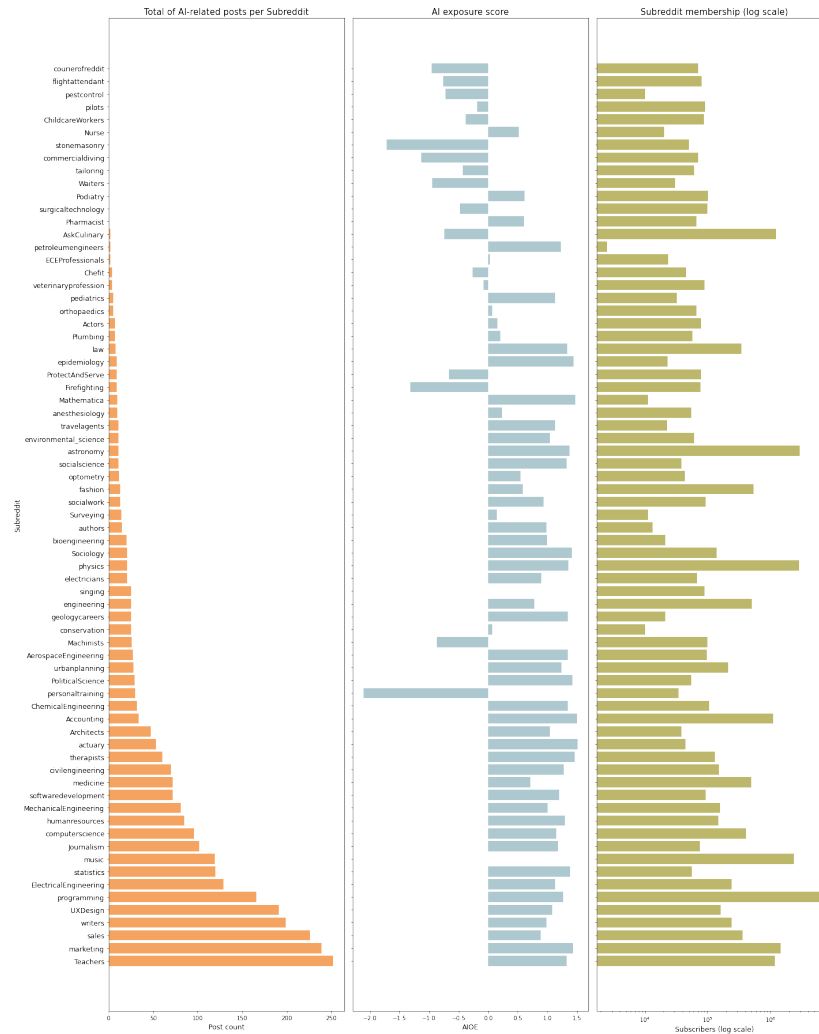


Figure 1: Number of posts and membership of each subreddit

Figure 1 illustrates the relationship between the number of members in each Subreddit, the number of AI-related posts, and the associated AI exposure score of each profession represented by Subreddits. The membership is presented in log scale for readability. The graph shows that the number of AI-related posts is not correlated with the number of member the subreddit has, suggesting the interest in AI is not driven by the size of membership but rather by

the nature of the job. For instance, Subreddits such as r/journalism, r/writers, r/UXDesign, r/teachers, r/sales, r/marketing, r/ElectricalEngineering, exhibit a relatively high level of interest in AI despite having comparatively smaller memberships. Subreddits associated with STEM and computer-related professions, such as r/ElectricalEngineering and r/computerScience, are more engaged in discussions about AI due to the strong technical connections between AI and their fields, which aligns with the general expectation. In contrast, Subreddits like r/journalism and r/writers show unexpectedly high levels of AI-related discussions. This engagement may stem from the increasing relevance of AI tools in content creation, editing, and analysis, suggesting a user-tool relationship with AI rather than a direct technical connection.

The AI exposure score seems to go in tandem with the number of posts. Notably, groups that have negative AI exposure score tend not to discuss AI at all, with a few exceptions being r/firefighting (fire fighters), r/Protectandserve (Police officers), r/personaltraining (personal trainers), r/machinist (machinists). The outliers can be telling: the overlap between the tasks of these jobs and AI capabilities might be higher than the index predicts.

Overall, this graph begs a further question: "Which are the underlying drivers of AI engagement across occupations?". For that question, a detailed examination of each job's skill requirements and task components could provide further explanation.

4.2 Trends

The impact of ChatGPT is evident in the graphs. After the release of ChatGPT on the 30th of November, 2022, conversations across all Subreddits about AI increased twofold or threefold and have hovered around that level since. A similar spike can be observed around March 2023, the release of ChatGPT-4, which underlines how powerful and conversation-stirring the new GPT-4 model was.

Concerns A common theme is the concern about the potential job threats posed by AI. This is one of the expected themes and has a major significance to the paper since we are trying to identify whether people perceive AI as a threat or a tool.

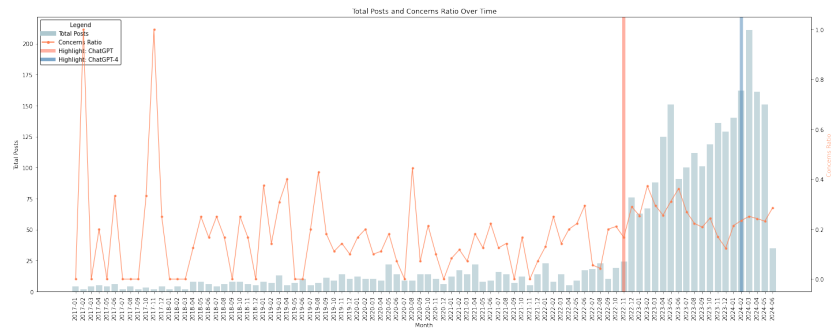


Figure 2: Mentions of concerns about AI over time in Treatment group

Before ChatGPT, Redditors already discussed the job threats of AI. In fact, the worry accounted for half of the AI-related conversations on Reddit before ChatGPT. After the release of ChatGPT, people still see AI as a threat to their professional roles, as confirmed by the data. However, a more noticeable trend is that, in relative terms, people mention about fear of AI at the same percentage or even less compared to pre-GPT time. We can even see a small decline in the percentage of concerns discussions over the general AI discussions after May of 2023. This suggests that even though conversations about AI increase after ChatGPT, fear is not the sole focus of online public discussions.

Use Another important theme of interest is whether Redditors use AI for their work, which signifies the complementary aspect of AI. Despite all the threats it poses, AI is also a tool that is intended to facilitate work, increase efficiency for people who might find it useful. Manual review and topic modeling results show that people pose multiple questions about how to use AI tools in their jobs to speed up their increase their productivity.

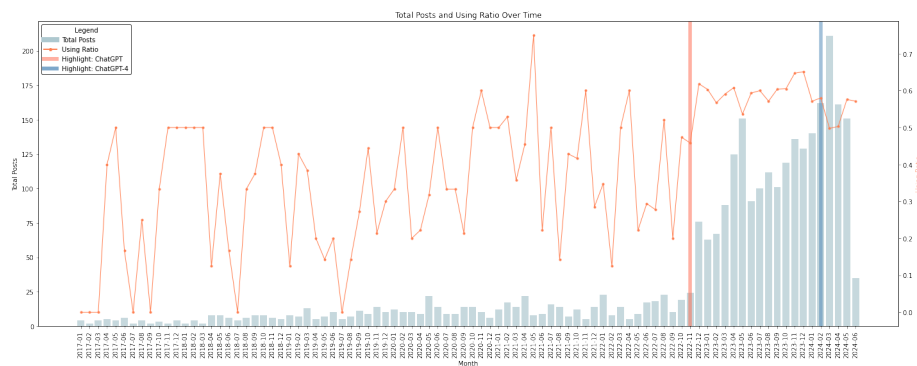


Figure 3: Mentions of usage of AI over time

The graph shows that, following the release of ChatGPT and ChatGPT4,

more than half of the monthly posts during this period reference the use of AI. This trend underscores the increasing ubiquity of AI in professional spaces, at least among Reddit users, and highlights its complementary role in various tasks. This suggests that regardless of whether individuals express fear or enthusiasm, many are beginning to integrate AI into their work, or at the very least, explore its potential applications.

When comparing the two graphs, it appears that mentions of concerns about job losses and uncertainty are notably fewer compared to discussions about AI usage. Redditors seem to express more enthusiasm for exploring how to integrate AI into their jobs than repeatedly voicing fears about job displacement. One might conclude that Redditors would embrace the technology more than show apprehension. However, another plausible explanation for this phenomenon is that questions or discussions like "Is AI going to take over our jobs?" tend to be asked only a finite number of times. After a while, people can already find answers in previous discussions, or the moderators of Subreddits will actively ban this question due to its repetitiveness. In contrast, talks about AI applications are inherently more varied, ranging from generic use cases to niche, context-dependent queries. This diversity allows for a more continuous and expansive discourse about AI usage.

Thus, the two graphs do not necessarily indicate that people are more optimistic about AI than apprehensive. Instead, they reflect a more rounded perspective where individuals, while remaining cautious about AI's potential risks, also embrace its power and seek to leverage its capabilities to enhance their work. This suggests that the conversation around AI is evolving beyond fears, with users increasingly focusing on practical and constructive ways to incorporate AI into their professional lives.

Learning I chose this keyword since it refers to one type of adaptive coping mechanism that people adopt to protect themselves against the threat of AI. Another reason is the novelty. The majority of the discussions about AI often revolve around whether AI is a threat or an opportunity, but not many discuss what people do to face the potential threats. This might shed light on how Reddit users respond to the development of AI and its growing ubiquitousness in their jobs. The finding might have potential policy implications as it might show how people in different industries respond to the surge of AI, i.e., whether they demand more protection from the government or try to adapt to the changes by themselves.

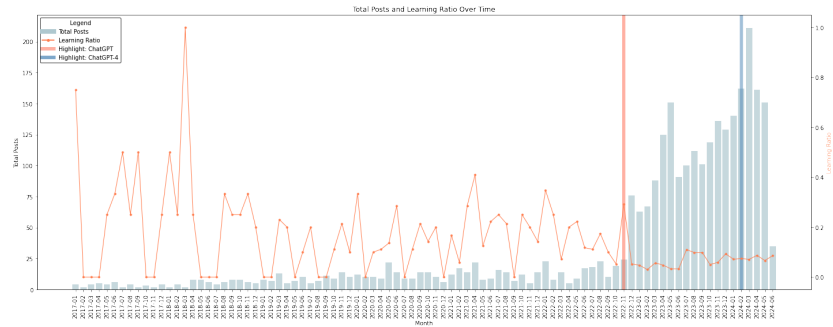


Figure 4: Mentions of learning over time in Treatment group

4.3 Profession differences

The first figure presents the crude sum of posts that exhibit either concerns about AI or its usage, along with each associated occupation's AIOE score. However, due to the varying membership sizes across Subreddits, this measure can introduce bias and skew the interpretation of the results. To address this, the second figure depicts the percentage of posts mentioning "Using" or "Concerns" relative to the total number of posts in each Subreddit, providing a more accurate reflection of each Subreddit's perception of AI.

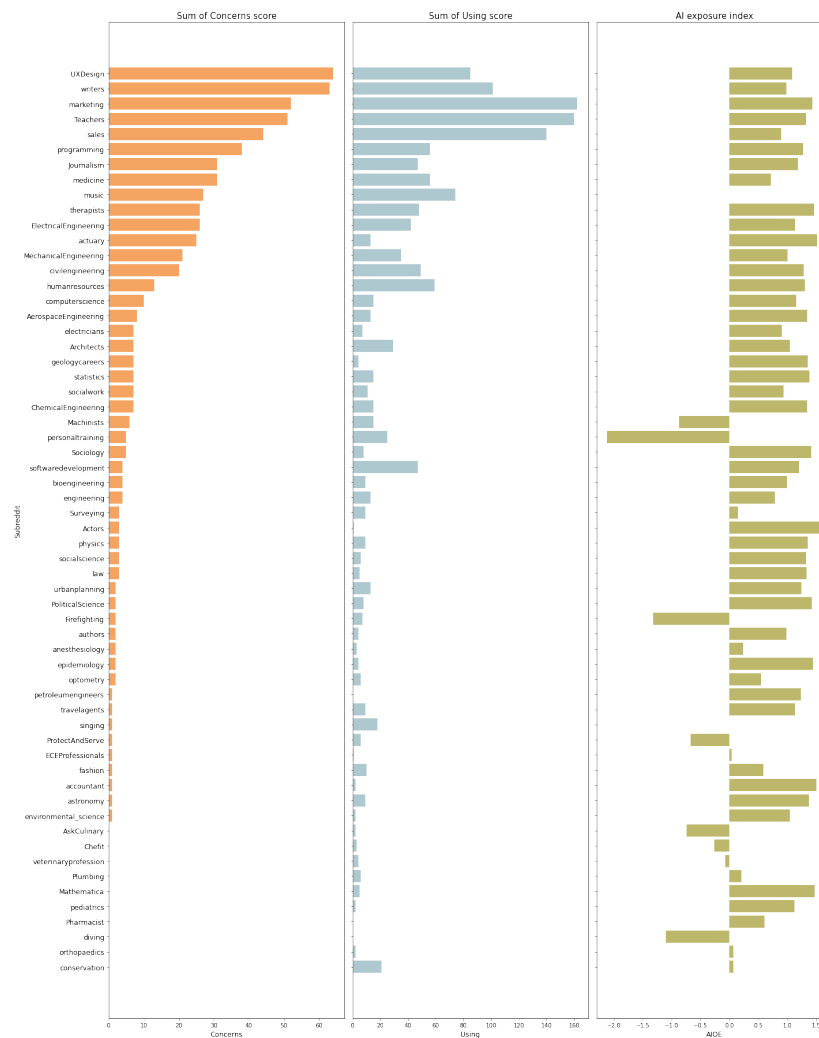


Figure 5: Sum of Concerns and Use by Subreddit



Figure 6: Mean of Concerns and Use by Subreddit

Overall, the majority of Subreddits focus on discussing the use of AI rather than expressing concerns about its potential to displace jobs. Several Subreddits exclusively mention AI's applications without raising concerns about its implications. Exceptions to this trend include Subreddits such as r/actors, r/actuary, r/petroleumengineers, and r/geologycareers, which exhibit a higher proportion of concerns. These findings align with the broader trends observed in the earlier graph, where discussions around the use of AI dominate over expressions of apprehension.

It is important to note that "Using" and "Concerns" are not mutually exclusive; a single post can discuss both the utilization of AI and concerns about its

impact simultaneously. From both graphs—whether based on crude numbers or percentages—it is apparent that there is no clear relationship between the AIOE (AI Occupational Exposure) score and either the concerns score or the usage score.

However, a notable observation is the vast variation in the composition of concerns and usage across different Subreddits. This suggests that the nature of the profession represented in each Subreddit may play a more significant role in shaping the discourse around AI.

5 Regression Results

Table 3 presents the relationship between job-related variables and the number of posts per Subreddit. Since the presence of posts about AI—whether positive or negative—already indicates a certain degree of engagement or investment in the topic, these posts serve as a signal of varying levels of fear, interest, or attention toward AI, conditioned on specific occupations. The first dependent variable is the crude number of AI posts obtained by queries using AI keywords per the description in the data collection section. The second dependent variable is the ratio of AI-related posts to the total number of posts in the Subreddits for robustness. It is to make sure that the interest of AI is not due to the general activity on the Subreddit. The analysis also includes Subreddits where no posts about AI were observed, such as r/waiters (waiters and waitresses), r/Couriers (couriers and messengers), and r/commercialdiving (commercial divers). These groups represent occupations that did not engage with or express any observable interest in AI-related discussions, providing a comparative baseline in the analysis.

The independent variables consist of occupation-specific scores, capturing a range of factors that may influence AI-related discussions. These include salary levels, AI exposure score, which quantifies the extent to which AI impacts or interacts with a given profession, and various skill scores reflecting the specific competencies required by the occupation.

The results indicate limited significant relationships between the number of posts, whether measured in crude numbers or normalized by the number of subreddit members, and occupation-related variables, with the notable exception of sell and teach. This observation may imply that professions that involve selling and teaching are more inclined to generate discussions or share content related to AI. This is evident from 1, where teachers, salespeople, and marketers post more content about AI than other professional groups considering their Subreddits' membership. A manual perusal of r/teachers reveals that, other than the normal concerns shared with other occupations, teachers have a particular gripe with AI: students using and cheating with AI. So AI not only affects the nature of their tasks and professions but also their key audience. Navigating students' use of AI is one of the pressing concerns for teachers, hence the significant number of posts regarding AI in the teachers' subreddit.

The next two tables 4 and 5 present the regression results for the Using,

Table 3: Regression on number of posts

Dependent Variables: Model:	post_count (1)	ratio (2)
<i>Variables</i>		
Constant	190.5 (206.3)	0.305 (0.275)
log_salary	-10.9 (20.4)	-0.017 (0.027)
math1	-8.29 (11.1)	-0.015 (0.015)
cooperate	-10.0 (23.4)	-0.013 (0.031)
teach	20.0 (14.7)	0.033* (0.020)
sell	19.4** (8.99)	0.026** (0.012)
dextrity	-8.07 (12.9)	-0.009 (0.017)
prob_solv2	30.7 (25.7)	0.043 (0.034)
aioe	18.2 (12.4)	0.027 (0.017)
communicate	-21.3 (35.5)	-0.037 (0.047)
age	-1.55 (1.74)	-0.002 (0.002)
subscribers	1.82×10^{-5} ** (7.36×10^{-6})	2.01×10^{-8} ** (9.79×10^{-9})
<i>Fit statistics</i>		
Observations	71	71
R ²	0.35139	0.34996
Adjusted R ²	0.23046	0.22877
<i>IID standard-errors in parentheses</i>		
<i>Signif. Codes: ***: 0.01, **: 0.05, *: 0.1</i>		

Concerns, and Learning scores. Standard errors are clustered at the group level.

To construct the ratio for each score, I first obtained the number of Top posts per month for each subreddit through Reddit API. I then divided the number of AI-related posts by this monthly total to account for fluctuations in overall subreddit activity over time, such as increases in membership, exogenous shocks, or unusually active new users. This ratio helps ensure the robustness of the regression analysis.

Tasks *Math, cooperate, problem solving* show negative relationships with concerns about AI. Occupations that require mathematical skills tend to exhibit fewer concerns about AI on average compared to jobs that do not emphasize mathematical abilities. A similar trend is observed for roles where problem-solving and cooperation are central to the work. This suggests that individuals in these professions may feel more resilient or adaptable in the face of AI advancements. However, this finding contrasts with the broader consensus that AI, unlike earlier automation, threatens high-skilled jobs by overlapping with their task components. While AI models like ChatGPT have impressive capabilities, they have not yet demonstrated reliable excellence in mathematics. Wolfram, for example, has been available since 2009, yet it has not rendered humans obsolete in mathematical tasks.

An intriguing connection emerges when considering the relationship between mathematical skills and career mobility. Mathematical abilities seem to increase the likelihood of learning about AI, whether through online courses or formal education, leading to potential career shifts. This pattern is evident in Subreddits for actuaries, accountants, and statisticians, where discussions often revolve around transitioning to AI-driven roles or pursuing academic majors in data science. The overlap between the skill sets required in these professions and data science makes such transitions more feasible, lower the cost of switching jobs. A compelling hypothesis to explore is whether individuals with strong mathematical foundations see AI not as a threat but as an opportunity to pivot toward more AI-integrated fields, securing alternative career paths. This result carries significant policy relevance.

Professions involving *teaching* and *selling*, such as those represented in Subreddits like Marketing and Sales, show significant engagement with AI tools. These communities frequently discuss practical applications of AI to enhance productivity. This observation highlights the dual narrative of apprehension and enthusiasm: while concerns about AI remain, professions like these are also embracing its potential to improve work efficiency and outcomes.

Log salary also appears to influence the likelihood of expressing concerns about AI. This finding aligns with previous research, which shows that AI poses a greater threat to high-skilled, high-income jobs than to low-income occupations. High earners may feel more vulnerable to AI-driven changes, as these disruptions challenge their job security and bargaining power.

Table 4: Regression with ChatGPT marker

Dependent Variables: Model:	concerns (1)	using (2)	learning (3)
<i>Variables</i>			
Constant	-0.774 (0.616)	-0.509 (1.59)	-0.280 (0.516)
after_GPT	0.071** (0.030)	0.075 (0.072)	-0.024 (0.025)
aioe	0.015 (0.038)	-0.158* (0.084)	0.097*** (0.029)
log_salary	0.134** (0.066)	0.049 (0.146)	-0.002 (0.046)
math1	-0.062*** (0.016)	-0.009 (0.035)	0.044*** (0.016)
cooperate	-0.056 (0.055)	0.076 (0.108)	0.074 (0.066)
teach	0.021 (0.026)	0.019 (0.052)	-0.002 (0.027)
sell	0.001 (0.010)	0.090*** (0.020)	0.004 (0.011)
communicate	0.099* (0.059)	0.077 (0.113)	-0.008 (0.086)
dexterity	0.019 (0.043)	-0.044 (0.057)	-0.024 (0.029)
prob_solv1	-0.142** (0.069)	-0.055 (0.135)	0.036 (0.097)
age	-0.006 (0.004)	0.002 (0.006)	-0.0006 (0.006)
after_GPT $\times$ aioe	0.029 (0.028)	0.083 (0.062)	-0.072** (0.030)
<i>Fit statistics</i>			
Observations	2,900	2,900	2,900
R ²	0.02676	0.07609	0.05431
Adjusted R ²	0.02272	0.07225	0.05038

Clustered (key) standard-errors in parentheses
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Table 5: Regression - ratio over total number of all posts

Dependent Variables: Model:	concerns.ratio (1)	using.ratio (2)	learning.ratio (3)
<i>Variables</i>			
Constant	1.14 (0.808)	0.700 (1.64)	-0.171 (0.254)
after_GPT	0.213** (0.086)	0.513*** (0.188)	0.021 (0.014)
aioe	0.017 (0.085)	0.036 (0.141)	0.003 (0.019)
log_salary	0.015 (0.072)	0.072 (0.134)	0.007 (0.025)
math1	-0.151*** (0.038)	-0.218*** (0.073)	-0.0009 (0.012)
cooperate	-0.304* (0.161)	-0.247 (0.335)	-0.066** (0.029)
teach	-0.037 (0.058)	0.011 (0.108)	-0.007 (0.017)
sell	-0.023 (0.026)	0.104** (0.049)	0.021** (0.008)
communicate	0.423* (0.212)	0.627* (0.354)	0.087** (0.034)
dexterity	0.102 (0.076)	-0.072 (0.147)	-0.010 (0.017)
prob_solv1	-0.302* (0.167)	-0.483 (0.433)	0.016 (0.041)
age	-0.015 (0.011)	-0.017 (0.016)	-0.002 (0.003)
after_GPT $\times$ aioe	0.034 (0.084)	-0.055 (0.163)	-0.008 (0.020)
<i>Fit statistics</i>			
Observations	2,900	2,900	2,900
R ²	0.04001	0.07908	0.01010
Adjusted R ²	0.03602	0.07526	0.00598

Clustered (key) standard-errors in parentheses

*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

Temporal markers The release of ChatGPT has had noticeable impacts across all dependent variables. The introduction of ChatGPT increased both Using and Concerns about AI, while slightly reducing discourse around Learning. This pattern suggests that ChatGPT’s accessibility heightened public awareness, transforming AI from an abstract concept to a tangible tool in daily and professional life.

6 Causal Inference - Synthetic Control

6.1 Introduction to Synthetic Control

SCM is a causal inference tool built on the same principle as Difference-in-Differences (Diff-in-Diffs): comparing the differences between treatment and control groups before and after an intervention (Abadie, Diamond, and Hainmueller 2010). However, Diff-in-Diffs relies on a strict parallel trends assumption, which requires that, prior to the intervention, the treatment and control groups follow the same trend in the outcome variables. In this study, for instance, the assumption would mean that before the release of ChatGPT, the concerns score of the treated and control groups must move in parallel.

This assumption, while powerful, is often difficult to meet. In fact, pre-trend tests in this study show that the treatment and control groups do not follow parallel trends, violating the key requirement for Diff-in-Diffs. Such violations would render the results of Diff-in-Diffs invalid. Therefore, in this context, the Synthetic Control Method offers a more suitable approach for causal analysis.

The Synthetic Control Method works by constructing a synthetic version of the treatment group. It combines data from multiple control units, weighted based on a set of predictors, to closely mimic the pre-intervention trends of the treatment group (*ibid.*) (Abadie, Diamond, and Hainmueller 2015). This synthetic control serves as the counterfactual for the treated unit, allowing for a direct comparison of pre- and post-intervention outcomes. By doing so, SCM isolates the average treatment effect while relaxing the strict assumptions required by Diff-in-Diffs. It is a powerful tool that has been employed in multiple research papers across different fields, such as in Comparative Politics (*ibid.*), in Public Health (Kreif et al. 2016), criminology (Saunders et al. 2015), economics (Billmeier and Nannicini 2013).

6.2 Result

The analysis for the Synthetic Control Method (SCM) is conducted at the group level rather than the post level, as the relevant characteristics for this study—such as skills and earnings—are tied to group-level attributes. Occupations with an AIOE score greater than 0 were grouped into a single treated unit, representing jobs with higher exposure to AI and automation. These occupations are characterized by a greater overlap between their tasks and AI’s capabilities, which heightens the tangibility of potential threats from AI ad-

vancements. In contrast, occupations with AIOE scores below 0, which have fewer task overlaps with AI, were assigned to the donor pool to construct the synthetic control. The outcome variable, *concerns*, measures apprehension about AI across these occupational groups.

The timeframe for the SCM analysis spans from January 2022 to October 2023. When selecting the time unit for analysis, there is a trade-off between extensiveness (covering a 15-year period) and accuracy. Conducting the analysis at the yearly level would allow for a broader time scope but at the cost of precision. On the other hand, using more than 100 months as the time unit for the Synthetic Control Method (SCM) would result in a poorly constructed synthetic control due to data sparsity and noise. To balance these considerations, I chose to shorten the timeframe and use months as the unit of analysis.

This decision is supported by the data trends. As shown in Figure 2, the difference between December 2022 and November 2022 is substantial, whereas mentions of AI over the previous ten years were relatively marginal. The month-level analysis allows us to capture these sharp changes more effectively, ensuring greater accuracy in identifying the impact of key events like the release of ChatGPT.

Table 6 presents the predictor weights and donor pool weights, which determine how the synthetic control is constructed. Predictor weights indicate the relative importance of each variable in aligning the synthetic control with the treated unit, while donor pool weights show the contributions of different control units to the synthetic counterpart. Among predictors, variables like *sell* and *cooperate* carry higher weights compared to others, reflecting their significant role in shaping the pre-treatment characteristics of the treated unit.

In terms of donor pool weights, *veterinaryprofession* emerges as the most significant contributor, accounting for 72% of the synthetic control. Other units, such as *singing* and *music*, make smaller but meaningful contributions, while the remaining donor units have minimal influence.

Table 6: Predictor Weights and Donor Pool Weights for the Synthetic Control

Predictor Weights		Donor Pool Weights	
Predictor	Weight	Donor Unit	Weight
math1	0.152	AskCulinary	0.001
AIOE	0.116	Chefit	0.000
log_salary	0.143	Firefighting	0.090
teach	0.143	Machinists	0.000
sell	0.164	ProtectAndServe	0.001
cooperate	0.145	diving	0.000
communicate	0.136	music	0.093
–	–	personaltraining	0.000
–	–	singing	0.093
–	–	veterinaryprofession	0.723

Table 7 highlights the effectiveness of the synthetic control in replicating the treated unit. The synthetic control closely mirrors the treated unit’s characteristics, whereas the sample mean (representing the raw control group) shows greater divergence. This underscores the importance of using a synthetic control instead of relying on unweighted averages to provide a more accurate counterfactual for causal inference.

Table 7: Predictor Balancing for the Synthetic Control

Predictor	Treated	Synthetic	Sample Mean
math1	2.964	2.305	1.817
AIOE	1.047	-0.175	-0.716
log_salary	11.554	11.555	10.990
teach	2.821	2.858	3.080
sell	1.950	2.743	2.249
cooperate	3.200	3.148	3.941
communicate	4.263	4.460	4.321

Figure 7 illustrates the trends of the treated unit and its synthetic control over time. Before the intervention, the treated and synthetic control exhibit closely aligned trends, with no significant differences. However, immediately following the intervention, the two trends diverge significantly. This widening gap highlights the increased apprehension within the treated unit after the release of ChatGPT, reflecting the impact of GPT on the treated group’s perceptions and concerns.

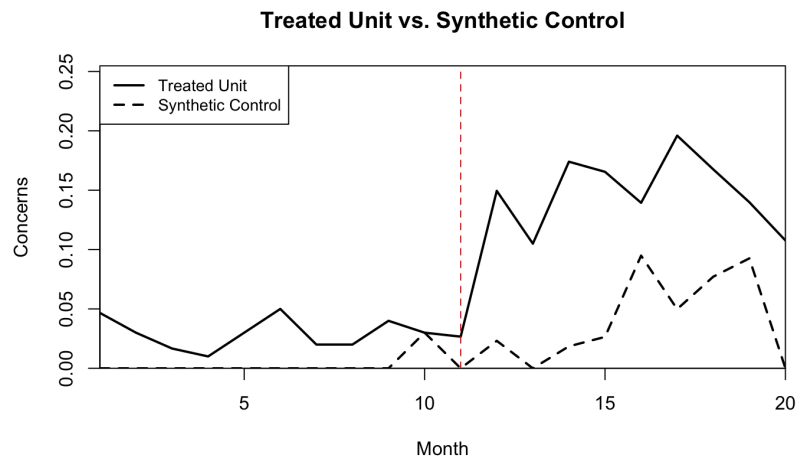


Figure 7: Treated and Synthetic Control

Figure 8 highlights the difference between the treated unit and the synthetic

control before and after the intervention. Prior to the intervention, the difference remains relatively stable, hovering around zero. However, following the treatment, there is a sudden and pronounced increase in the gap, underscoring the significant impact of the intervention—namely, the release of ChatGPT.

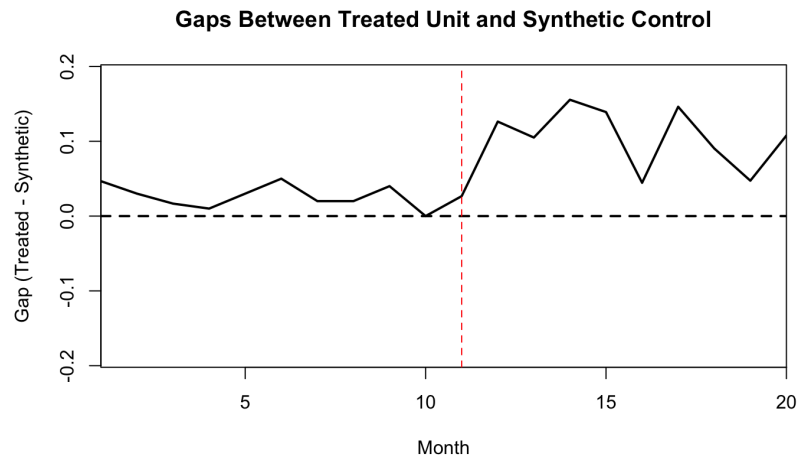


Figure 8: Treated and Synthetic Control - Gap

7 Additional observations

One particular occupation that is worth further discussion is conservationists. Conservation work stands out as a field that significantly benefits from AI integration. Interestingly, it is one of the rare groups that focus solely on the advantages of AI and how to incorporate it into their daily tasks, without voicing concerns about AI potentially replacing their roles. Conservationists have been leveraging AI tools to perform tasks such as identifying at-risk areas, analyzing ocean imagery, tracking wildlife movements, and detecting illegal fishing activities. These applications demonstrate how AI can enhance the effectiveness of their work while addressing complex environmental challenges. This finding aligns closely with existing research (Kwok 2019), which highlights AI's potential to complement and expand human capabilities in conservation efforts, rather than displace them. Furthermore, conservationists play a crucial role in environmental protection, and by aiding their efforts, AI has made meaningful contributions to the improvement of the environment. By enhancing the ability to analyze vast amounts of environmental data, track changes in ecosystems, and detect illegal activities, AI has become a valuable tool for conservation work. While it is still too early to determine whether AI will have a decisive impact on addressing climate change, its current applications are showing promising potential.

8 Conclusion

This paper shows promising results. First, Reddit users do not view AI solely as a threat but also as a complementary tool, as evidenced by their discussions on AI usage in their professional workspace. It reveals a twofold narrative: while concerns about job displacement persist, professionals increasingly incorporate AI into their work, highlighting its productivity-enhancing potential and demonstrating a general willingness to adapt. Regression analysis shows that professionals who frequently use mathematical, cooperative, and problem-solving skills in their work express fewer concerns about job displacement. Professions centered on teaching and selling engage more actively in discussions about AI usage. Notably, mathematical skill can be a cushion for professionals against displacement for its high transferability and little overlapping with GPT capabilities, which explains the lower apprehension among such professionals. The release of ChatGPT also plays a significant role in shaping public perception, as shown by the Synthetic Control Method.

However, the demographic skew of Reddit—predominantly young, male, and American—poses a challenge to the generalizability of the findings. Although the exact demographics of individual Subreddits remain unclear, the self-selection into specific forums suggests that Reddit users can be more technologically savvy and open-minded than the general population, which could distort the broader reflection of societal attitudes toward AI. Nonetheless, Reddit provides a wealth of information and narratives, especially in job-related forums, which can uncover multiple emerging topics that are not in the traditional scope of labor market research. Furthermore, regarding the robustness of the findings, future research could address these limitations by incorporating robustness checks, such as placebo tests, to enhance the validity of the Synthetic Control Analysis. The causality between tasks and perceptions is also not yet rigorously tested in this paper.

Finally, this study offers insights for policymakers. It shows that individuals who feel confident in pivoting to different professions are less apprehensive about technological changes and more resilient during market disruptions. In this instance, those equipped with strong mathematical skills display confidence in their ability to transition to AI-resilient careers. This finding can help policymakers to prepare the workforce for disruptions caused by AI and other technological advancements.

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9 Appendix

Key	Title	Text	Concerns	Using	Learning
actuary	Would we be replaced by AI?	(Wasn't sure what flair to use, sorry) I'm entering the actuarial field (passed FM, studying for P), but with how AI/Machine learning has been advancing lately I'm worried the job might be rendered obsolete in the near future.	1	0	0
AerospaceEngineering	Will AI replace Aerospace Engineers?	What are people's opinions who are in industry on AI's role on design and automation? Will AI reduce the need for aerospace engineers over the next several decades, and if so how much? If so, is it affecting your decision making or thoughts on returning to school?	1	0	1
humanresources	Will AI automate and eliminate HRIS roles?	What are y'all's thoughts on whether HRIS roles will be replaced by AI? most HRIS systems are not the most cutting-edge so I can't see them creating a lot of AI features that completely automate human work..	1	0	0
writers	Is it okay to use ChatGPT as a source of editing	Hello guys, I have been using a chatgpt as a source for editing my novel for the past couple of weeks.	0	1	0
civilengineering	Chatgpt in Civil Engineering!	I wonder how this AI can help Civil Engineers in various facets of their job?	0	1	0
ElectricalEngineering	Everyone I know is getting into Data Science	Hi reddit! I'm a senior EE who wants to go to grad school. Most of the people I have asked about a master's have gone into controls/math and AI and eventually data science.	0	0	1
statistics	[Q] What're some graduate programs that are good for AI/Machine Learning?	I've found a few great program in applied math departments, hybrid/interdisciplinary departments (like at MIT) and entire machine learning departments (like CMU).	0	0	1

Table 9: Excerpts from the dataset

Table 10: Subreddit and Job Title List (Part 1)

Key	Job Title
AerospaceEngineering	Aerospace Engineers
anesthesiology	anesthesiologist
AskCulinary	Cooks
actuary	actuaries
accounting	accountant
Actors	Actor
Architects	Architects
astronomy	Astronomers
authors	Writers and Authors
Barber	Barbers
barternders	bartenders
bioengineering	Biochemists and Biophysicists
ChildcareWorkers	childcare workers
ChemicalEngineering	Chemical Engineers
Chefit	Chefs
civilengineering	Civil Engineers
commercialdiving	Commercial Divers
computerscience	Computer Scientists
conservation	Conservation Scientists
courierofreddit	Couriers and Messengers
Dentists	Dentist
ElectricalEngineering	Electrical Engineers
electricians	Electricians
epidemiology	Epidemiologists
ECEProfessionals	Early Childhood Educators
engineering	EngEngineers, All Otherineers
environmental_science	Environmental Scientists and Specialists
flightattendant	Flgiht Attendant
Firefighting	Fire Fighters

Table 11: Subreddit and Job Title List (Part 2)

Key	Job Title
fashion	Fashion Designers
geologycareers	Mining and Geological Engineers
humanresources	Human Resources Managers
Journalism	Journalists
law	Lawyers
Machinists	Machinist
marketing	Marketing Specialists
Mathematica	Mathematicians
medicine	MedPhysicians and Surgeons
MechanicalEngineering	Mechanical Engineers
music	Musicians
Nurse	Nurse
optometry	optometrists
Paramedics	Emergency Medical Technicians and Paramedics
Pediatrics	Pediatricians
personaltraining	Fitness Trainers and Aerobics Instructors
Pharmacist	pharmacist
pilots	Commercial Pilots
PoliticalScience	Political Scientists
Plumbing	Plumbers, Pipefitters, and Steamfitters
ProtectAndServe	Police Officers
programming	Computer Programmers
socialscience	Social Scientists
socialwork	Social Workers
softwaredevelopment	Software Developers
sales	Sales Representatives
Sociology	Sociologists
statistics	statistician
stonemasonry	Stonemasons
Surveying	Surveyors
surgicaltechnology	surgical technologist
tailoring	tailors
Teachers	Teachers
therapists	Mental Health Counselors
travelagents	travelagents
urbanplanning	Urban and Regional Planners
uphostery	Upholsterers
UXDesign	UX Designers
veterinaryprofession	Veterinarians
Waiters	Waiters and Waitresses
writers	Writers

Key	Value	Range (1–5)
dexterity_fo	Skill use work - How often - Using hands or fingers	1–5
psolve1_fo	Skill use work - Problem solving - Simple problems	1–5
psolve2_fo	Skill use work - Problem solving - Complex problems	1–5
math1_fo	Skill use work - Numeracy - How often - Use simple algebra or formulas	1–5
math2_fo	Skill use work - Numeracy - How often - Use advanced math or statistics	1–5
teach_fo	Skill use work - How often - Teaching people	1–5
planothers_fo	Skill use work - How often - Planning others activities	1–5
influence_fo	Skill use work - How often - Influencing people	1–5
negotiate_fo	Skill use work - How often - Negotiating	1–5
sell_fo	Skill use work - How often - Selling	1–5
advise_fo	Skill use work - How often - Advising people	1–5
cooperate_fo	Skill use work - Time cooperating with co-workers	1–5

Table 12: Skills Use at Work with Key Descriptions and Ranges

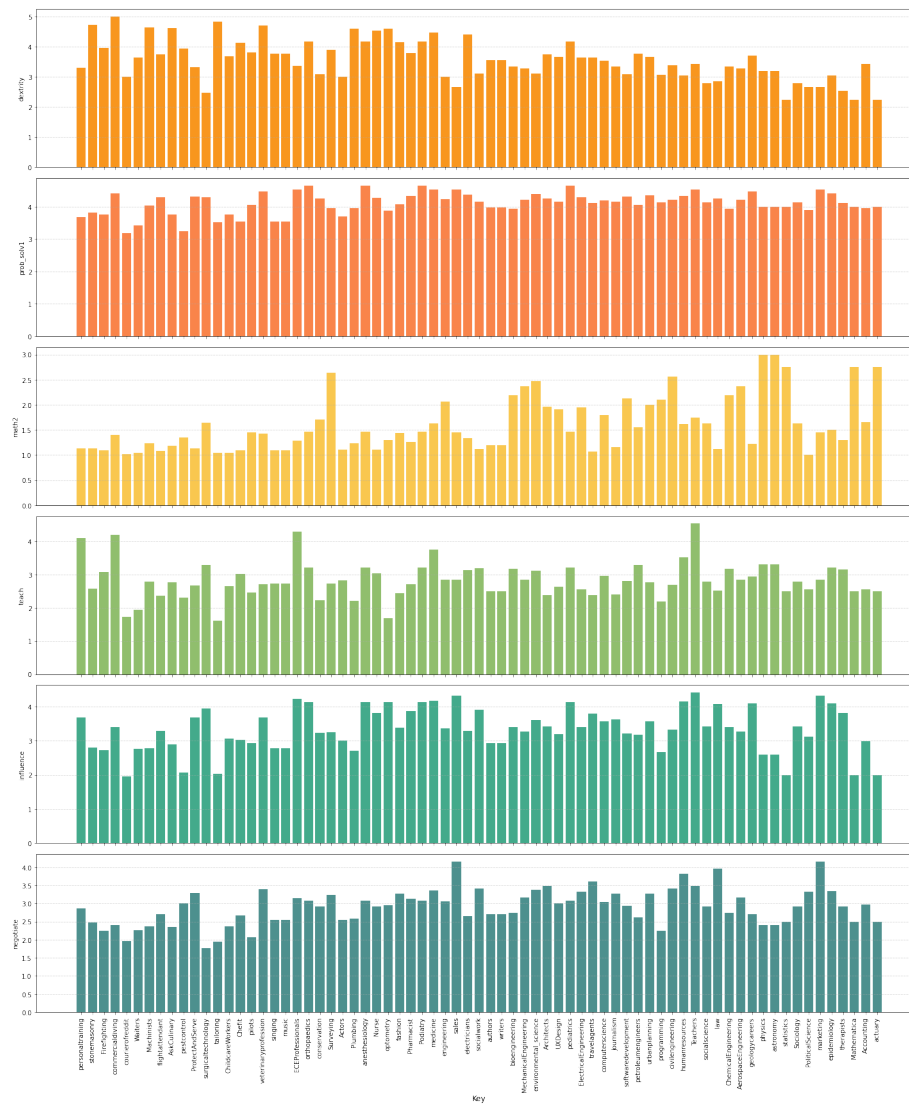


Figure 9: Skill score by profession

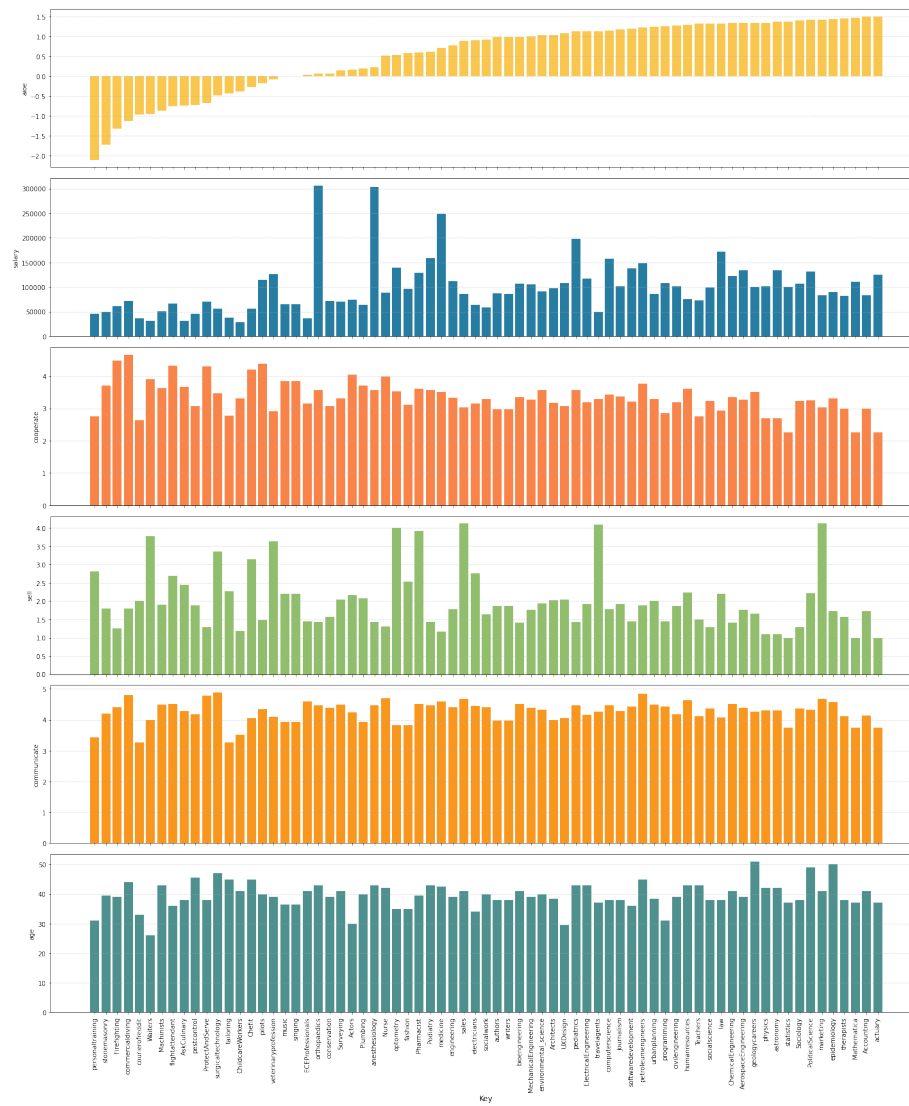


Figure 10: Skill score by profession

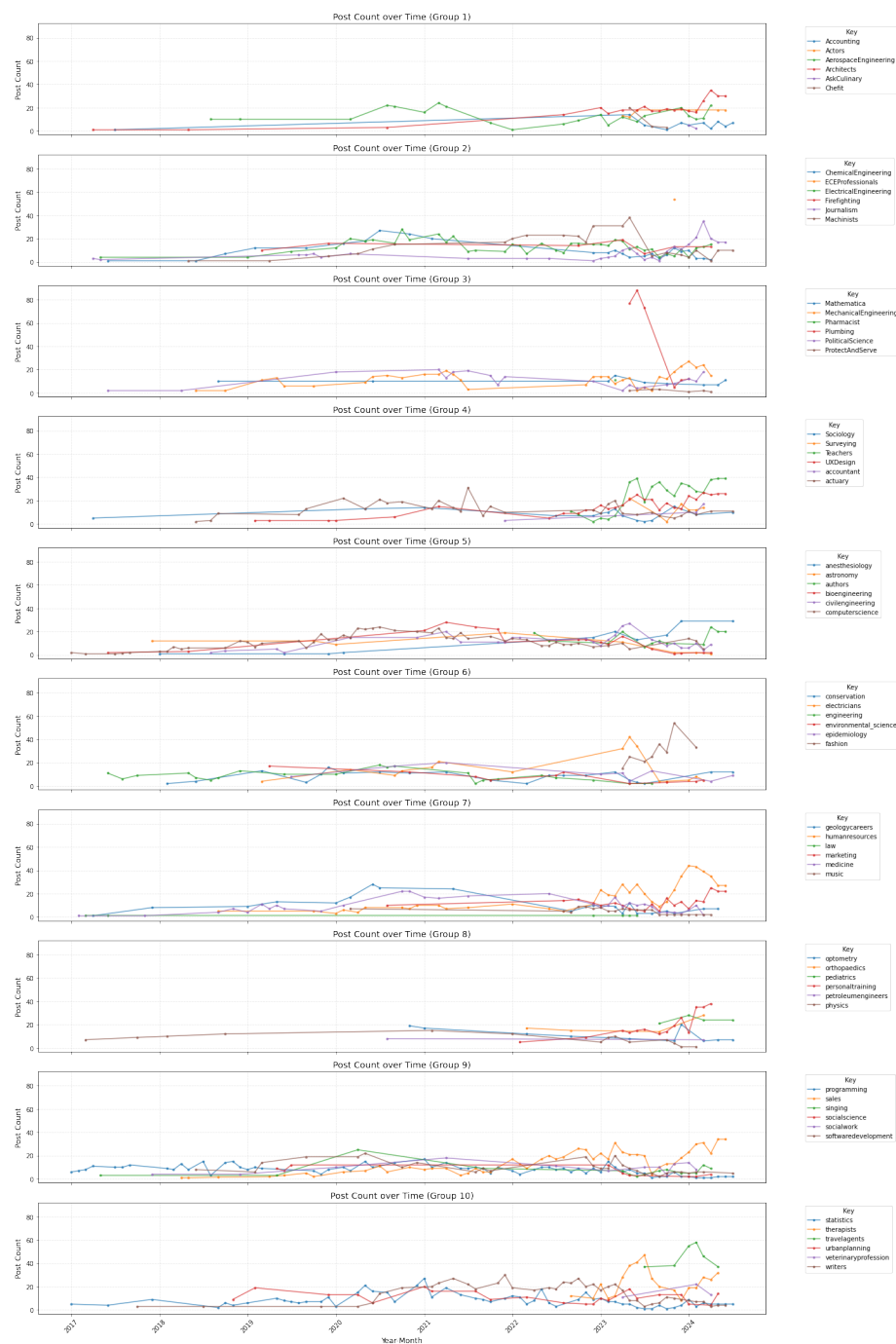


Figure 11: Caption