

LLMのインパクト

調査論文 “GPTs are GPTs: An Early Look at the Labor
Market Impact Potential of Large Language Models”
から読み取れること

LLMは自然言語処理だけでない

- LLMs can process and produce various forms of sequential data, including assembly language, protein sequences and chess games, extending beyond natural language applications alone.
- LLMは、自然言語に限らず、どんな系列情報をも処理し、生産できる。機械命令語列、タンパク質配列、チェスゲームなど。

LLMは急激に成長している

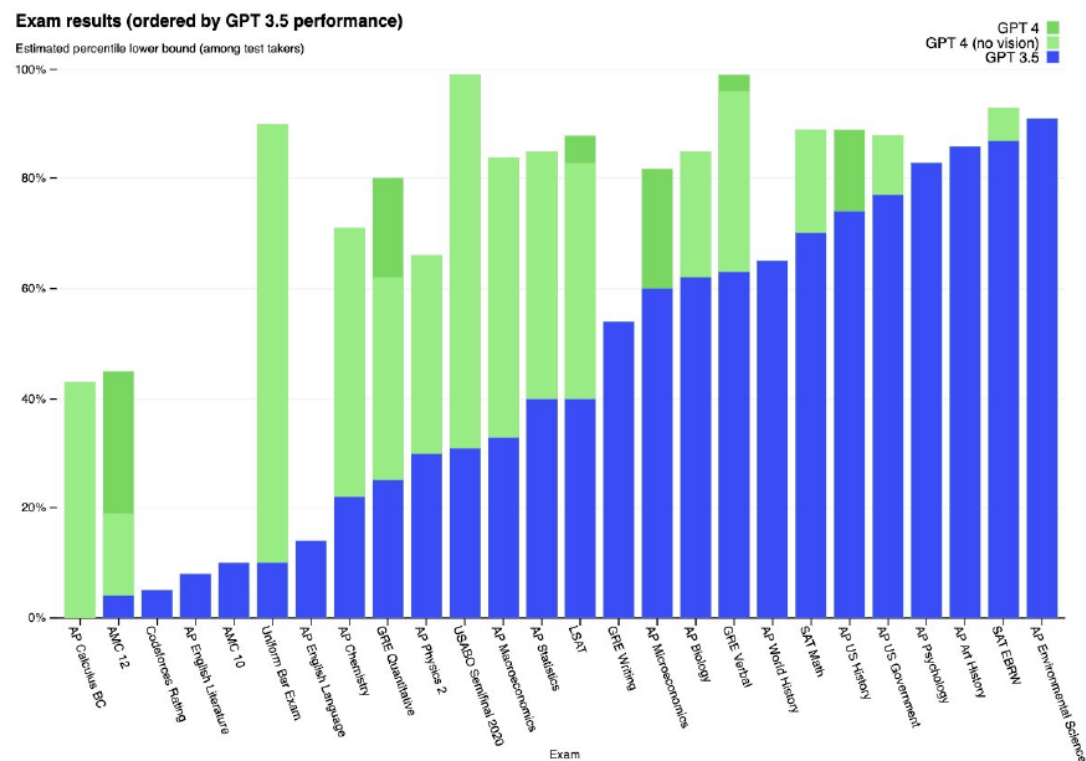


Figure 1: To get a sense of how quickly model capabilities are progressing – consider the jump in exam performance between GPT-3.5 and GPT-4 (OpenAI, 2023b).

GPTがどこまで影響するかの評価は、GPT自身にやらせても人がやっても同じ傾向だった一本論文の調査は妥当である

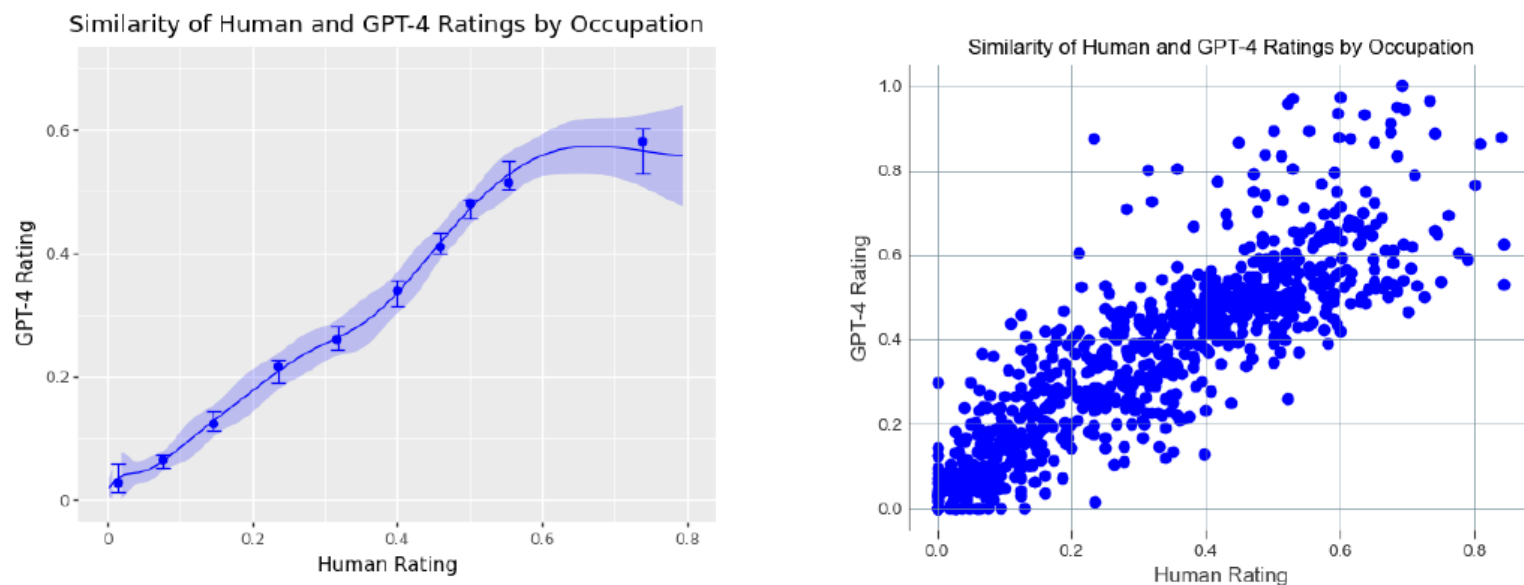
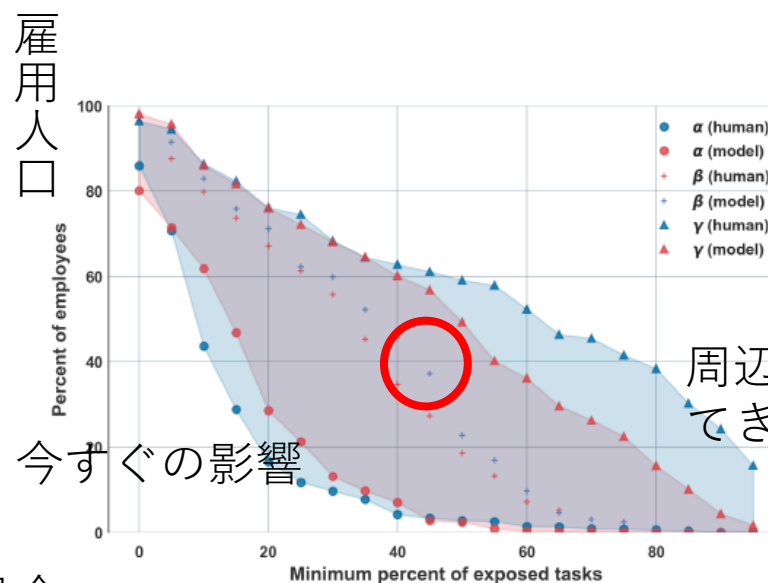
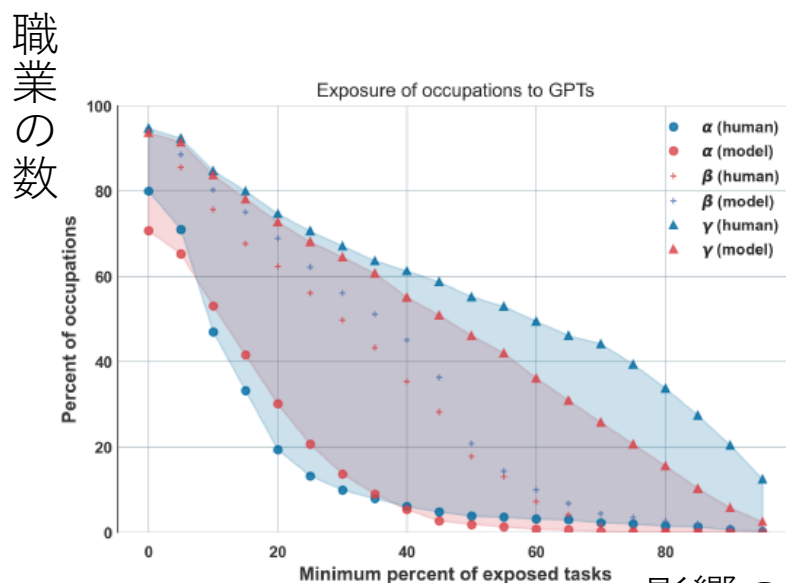


Figure 2: Human raters (x-axis) and GPT-4 ratings (y-axis) show a high degree of agreement about GPT exposure by occupation. Near the highest levels of exposure following the β method of aggregating exposure scores to occupations, GPT-4 ratings tend to be lower than Human ratings. We present the raw scatter and the binscatter. Near the top end of exposure ratings, humans are on average more likely to rate an occupation as exposed.

40%の人が仕事の45%に影響を受ける …など



今すぐの影響

周辺アプリがそろって
きた時点の影響

影響の具合

Figure 3: Exposure intensity across the economy, displayed on the left in terms of percent of affected occupations and on the right as percent of affected workers. The distribution of exposure is similar across occupations and across workers, suggesting that worker concentration in occupations is not highly correlated with occupational exposure to GPTs or GPT-powered software. We do however expect that it could be more highly correlated with investment in developing GPT-powered software for particular domains.

スキルと影響受け具合の相関： 読み書き、そろばん、プログラミングなどのスキルは、強く影響を受ける

今すぐの影響

周辺アプリがそろって
きた時点の影響

| Basic Skill | α (std err) | β (std err) | ζ (std err) |
|---|-----------------------|----------------------|----------------------|
| All skill importance scores are normalized to be between 0 and 1. | | | |
| Constant | 0.082*** (0.011) | -0.112*** (0.011) | 0.300*** (0.057) |
| Active Listening | 0.128** (0.047) | 0.214*** (0.043) | 0.449*** (0.027) |
| Mathematics | -0.127*** (0.026) | 0.161*** (0.021) | 0.787*** (0.049) |
| Reading Comprehension | 0.153*** (0.041) | 0.470*** (0.037) | -0.346*** (0.017) |
| Science | -0.114*** (0.014) | -0.230*** (0.012) | -0.346*** (0.017) |
| Speaking | -0.028 (0.039) | 0.133*** (0.033) | 0.294*** (0.042) |
| Writing | 0.368*** (0.042) | 0.467*** (0.037) | 0.566*** (0.047) |
| Active Learning | -0.157*** (0.027) | -0.065** (0.024) | 0.028 (0.032) |
| Critical Thinking | -0.264*** (0.036) | -0.196*** (0.033) | -0.129** (0.042) |
| Learning Strategies | -0.072* (0.028) | -0.209*** (0.025) | -0.346*** (0.034) |
| Monitoring | -0.067** (0.023) | -0.149*** (0.020) | -0.232*** (0.026) |
| Programming | 0.637*** (0.030) | 0.623*** (0.022) | 0.609*** (0.024) |

Table 5: Regression of occupation-level, human-annotated exposure to GPTs on skill importance for each skill in the O*NET Basic skills category, plus the programming skill. Descriptions of the skills may be found in Appendix [B](#).