SPECULATIEVE TOEKOMSTBEELDEN OVER AI IN HET HET MBO

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WAT GAAN WE DOEN?

Big Tech narratieven over technologie in de samenleving (10 minuten)

De impact op het mbo (10 minuten)

Aan de slag met toekomstscenario's voor het mbo (15 minuten)

Uitwisselen (30 minuten)

Ophalen thema's voor het volgende symposium (10 minuten)

DE AI RACE TUSSEN DE VS, CHINA EN EU

AI GOV PRESIDENT DONALD J. TRUMP

INTRODUCTION

America is in a race to achieve global dominance in artificial intelligence (AI). Winning this race will usher in a new era of human flourishing, economic competitiveness, and national security for the American people. Recognizing this, President Trump directed the creation of an AI Action Plan in the early days of his second term in office

AI infr

this A

Bold "AI First" Strategy in Turin

NIEUWS

Europees geld voor 'AI-fabriek' in Groningen

Juurd Eijsvoogel

10 oktober 2025 • Leestijd 1 minuut

Luister | Geef cadeau | Deel | Leeslijst

In en nabij het gebouw van de voormalige Niemeyer-tabaksfabriek in Groningen komt de zogenoemde 'AI-fabriek'. — FOTO CORNÉ SPARIDAENS/ANP

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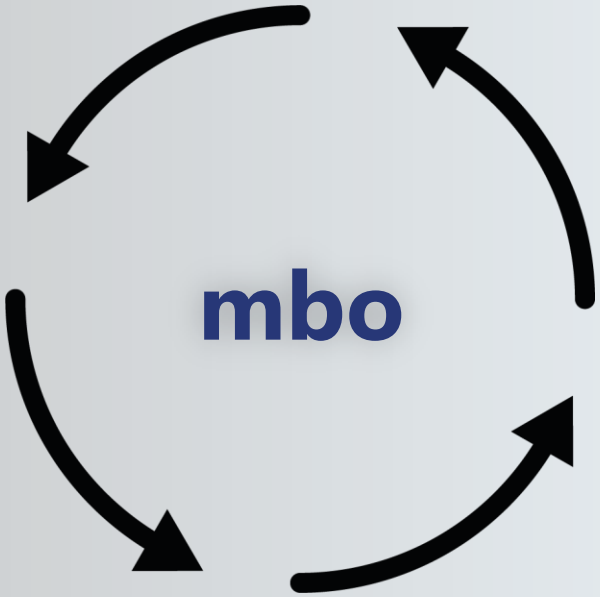
COLLECTIEVE IDEEËN OVER TECHNOLOGIE EN SAMENLEVING

Ruha Benjamin

DOORWERKING AI-TOEKOMSTBEELDEN IN HET MBO

Sam Altman on the Impact of Generative AI on Education

"Education is certainly going to change dramatically. And I think it is forever altered by the course of this technology" Sam Altman



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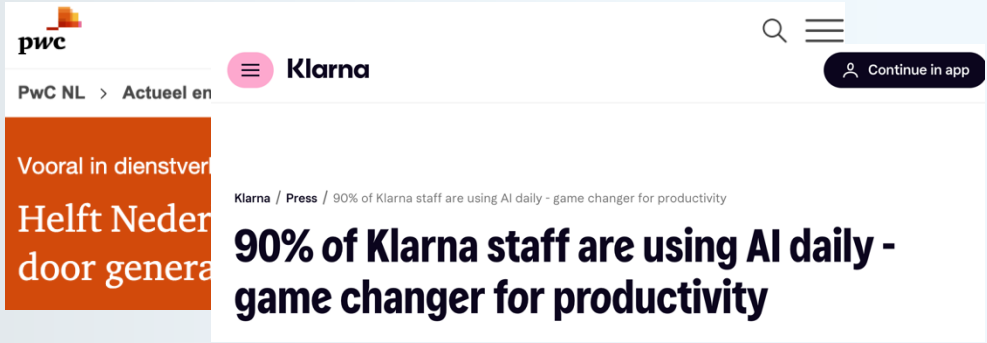


Big Tech

Bedrijfsleven

pull

beroepsonderwijs bedrijfsleven

SPECULATIES OVER DE ARBEIDSMARKT

Working with AI: Measuring the Occupational Implications of Generative AI*

Kiran Tomlinson[1], Sonia Jaffe[1], Will Wang[1], Scott Counts[2], and Siddharth Suri[1]

[1]Microsoft Research
[2]Microsoft

Abstract

Given the rapid adoption of generative AI and its potential to impact a wide range of tasks, understanding the effects of AI on the economy is one of society's most important questions. In this work, we take a step toward that goal by analyzing the work activities people do with AI, how successfully and broadly those activities are done, and combine that with data on what occupations do those activities. We analyze a dataset of 200k anonymized and privacy-scrubbed conversations between users and Microsoft Bing Copilot, a publicly available generative AI system. We find the most common work activities people seek AI assistance for involve gathering information and writing, while the most common activities that AI itself is performing are providing information and assistance, writing, teaching, and advising. Combining these activity classifications with measurements of task success and scope of impact, we compute an AI applicability score for each occupation. We find the highest AI applicability scores for knowledge work occupation groups such as computer and mathematical, and office and administrative support, as well as occupations such as sales whose work activities involve providing and communicating information. Additionally, we characterize the types of work activities performed most successfully, how wage and education correlate with AI applicability, and how real-world usage compares to predictions of occupational AI impact.

1 Introduction

General purpose technologies [7], such as the steam engine and the computer, have historically been strong drivers of economic growth, impacting a broad range of sectors and accelerating this impact with each new technical advancement. In the last several years, generative AI has come to the fore as the next candidate general purpose technology [17], capable of improving or speeding up tasks as varied as medical diagnosis [27] and software development [14]. These capabilities are reflected in the astounding rate of AI adoption: nearly 40% of Americans report using generative AI at home or work, outpacing the early diffusion of the personal computer and the internet [6]. Given this widespread adoption and potential for economic impact, a crucial question is *which* work activities are being most affected by AI and, by extension, which occupations.

We provide evidence towards answering this question by identifying the work activities performed in real-world usage of a mainstream large language model (LLM)-powered generative AI system, Microsoft Bing Copilot (now Microsoft Copilot). We analyze 200k anonymized user–AI conversations, which were automatically scrubbed for any personally identifiable information, sampled representatively from 9 months of Copilot usage in the U.S. during 2024. A key insight of our analysis is that there are two distinct ways in

*This study was approved by Microsoft IRB #11028. We thank Jennifer Neville, Ashish Sharma, Hancheng Cao, the Microsoft Research AI Interaction and Learning Group, and the Microsoft Research Computational Social Science Working Group for helpful discussions and feedback, and David Tittsworth, Jonathan McLean, Patrick Bourke, Nick Caurvina, and Bryan Tower for software and data engineering support. Correspondence to: kitomlinson@microsoft.com, sojaffe@microsoft.com, suri@microsoft.com.

Table 3: Top 40 occupations with highest AI applicability score.

Job Title (Abbrv.)	Coverage	Cmpltn.	Scope	Score	Employment
Interpreters and Translators	0.98	0.88	0.57	0.49	51,560
Historians	0.91	0.85	0.56	0.48	3,040
Passenger Attendants	0.80	0.88	0.62	0.47	20,190
Sales Representatives of Services	0.84	0.90	0.57	0.46	1,142,020
Writers and Authors	0.85	0.84	0.60	0.45	49,450
Customer Service Representatives	0.72	0.90	0.59	0.44	2,858,710
CNC Tool Programmers	0.90	0.87	0.53	0.44	28,030
Telephone Operators	0.80	0.86	0.57	0.42	4,600
Ticket Agents and Travel Clerks	0.71	0.90	0.56	0.41	119,270
Broadcast Announcers and Radio DJs	0.74	0.84	0.60	0.41	25,070
Brokerage Clerks	0.74	0.89	0.57	0.41	48,060
Farm and Home Management Educators	0.77	0.91	0.55	0.41	8,110
Telemarketers	0.66	0.89	0.60	0.40	81,580
Concierges	0.70	0.88	0.56	0.40	41,020
Political Scientists	0.77	0.87	0.53	0.39	5,580
News Analysts, Reporters, Journalists	0.81	0.81	0.56	0.39	45,020
Mathematicians	0.91	0.74	0.54	0.39	2,220
Technical Writers	0.83	0.82	0.54	0.38	47,970
Proofreaders and Copy Markers	0.91	0.86	0.49	0.38	5,490
Hosts and Hostesses	0.60	0.90	0.57	0.37	425,020
Editors	0.78	0.82	0.54	0.37	95,700
Business Teachers, Postsecondary	0.70	0.90	0.52	0.37	82,980
Public Relations Specialists	0.63	0.90	0.60	0.36	275,550
Demonstrators and Product Promoters	0.64	0.88	0.53	0.36	50,790
Advertising Sales Agents	0.66	0.90	0.53	0.36	108,100
New Accounts Clerks	0.72	0.87	0.51	0.36	41,180
Statistical Assistants	0.85	0.84	0.49	0.36	7,200
Counter and Rental Clerks	0.62	0.90	0.52	0.36	390,300
Data Scientists	0.77	0.86	0.51	0.36	192,710
Personal Financial Advisors	0.69	0.88	0.52	0.35	272,190
Archivists	0.66	0.88	0.49	0.35	7,150
Economics Teachers, Postsecondary	0.68	0.90	0.51	0.35	12,210
Web Developers	0.73	0.86	0.51	0.35	85,350
Management Analysts	0.68	0.90	0.54	0.35	838,140
Geographers	0.77	0.83	0.48	0.35	1,460
Models	0.64	0.89	0.53	0.35	3,090
Market Research Analysts	0.71	0.90	0.52	0.35	846,370
Public Safety Telecommunicators	0.66	0.88	0.53	0.35	97,820
Switchboard Operators	0.68	0.86	0.52	0.35	43,830
Library Science Teachers, Postsecondary	0.65	0.90	0.51	0.34	4,220

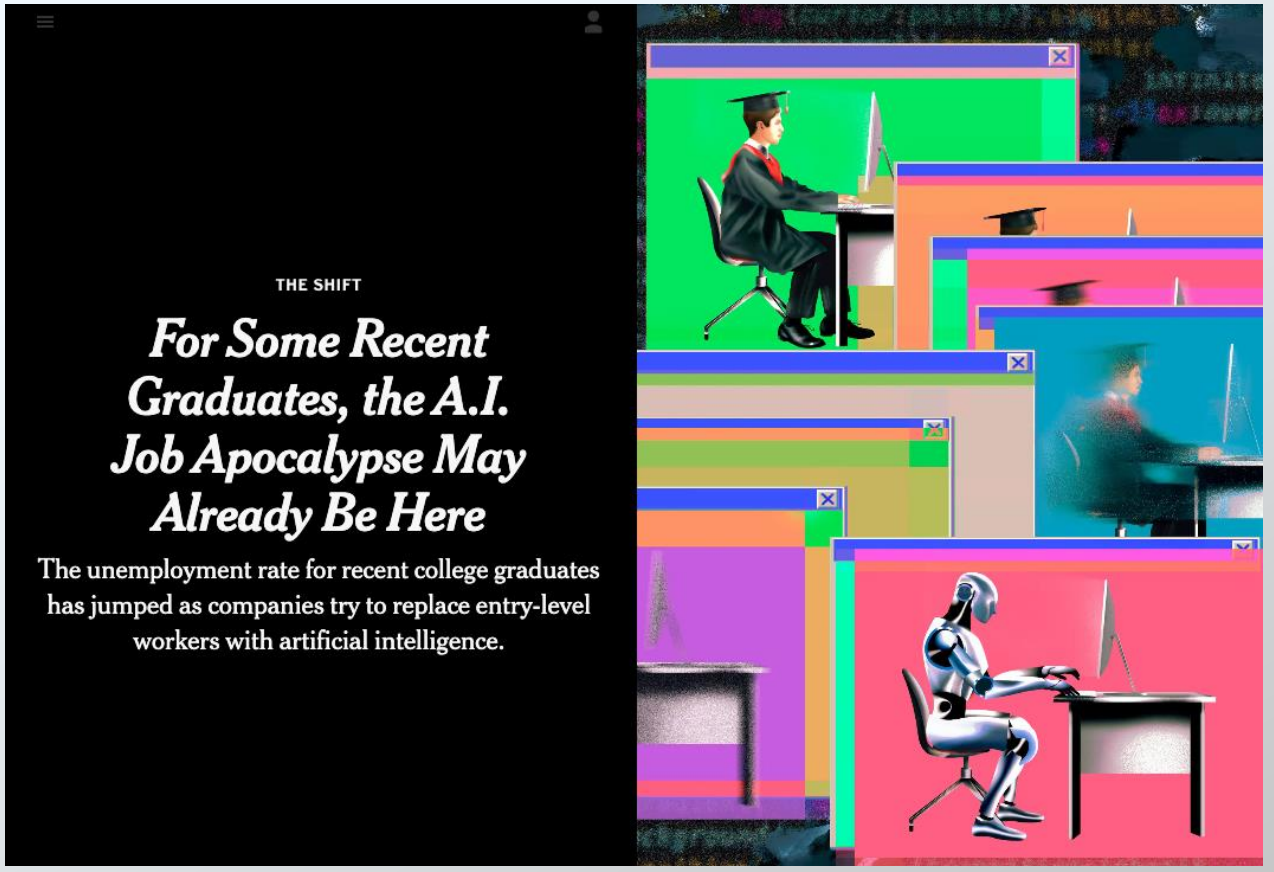
Note: Metrics reported as mean of user goal and AI action score.

Table 4: Bottom 40 occupations with lowest AI applicability score.

Job Title (Abbrv.)	Coverage	Cmpltn.	Scope	Score	Empl.
Phlebotomists	0.06	0.95	0.29	0.03	137,080
Nursing Assistants	0.07	0.85	0.34	0.03	1,351,760
Hazardous Materials Removal Workers	0.04	0.95	0.35	0.03	49,960
Helpers–Painters, Plasterers, ...	0.04	0.96	0.38	0.03	7,700
Embalmers	0.07	0.55	0.22	0.03	3,380
Plant and System Operators, All Other	0.05	0.93	0.38	0.03	15,370
Oral and Maxillofacial Surgeons	0.05	0.89	0.34	0.03	4,160
Automotive Glass Installers and Repairers	0.04	0.93	0.34	0.03	16,890
Ship Engineers	0.05	0.92	0.39	0.03	8,860
Tire Repairers and Changers	0.04	0.95	0.35	0.02	101,520
Prosthodontists	0.10	0.90	0.29	0.02	570
Helpers–Production Workers	0.04	0.93	0.36	0.02	181,810
Highway Maintenance Workers	0.03	0.96	0.32	0.02	150,860
Medical Equipment Preparers	0.04	0.96	0.31	0.02	66,790
Packaging and Filling Machine Op.	0.04	0.91	0.39	0.02	371,600
Machine Feeders and Offbearers	0.05	0.89	0.36	0.02	44,500
Dishwashers	0.03	0.95	0.30	0.02	463,940
Cement Masons and Concrete Finishers	0.03	0.92	0.39	0.01	203,560
Supervisors of Firefighters	0.04	0.88	0.39	0.01	84,120
Industrial Truck and Tractor Operators	0.03	0.94	0.28	0.01	778,920
Ophthalmic Medical Technicians	0.04	0.89	0.33	0.01	73,390
Massage Therapists	0.10	0.91	0.32	0.01	92,650
Surgical Assistants	0.03	0.78	0.29	0.01	18,780
Tire Builders	0.03	0.93	0.40	0.01	20,660
Helpers–Roofers	0.02	0.94	0.37	0.01	4,540
Gas Compressor and Gas Pumping Station Op.	0.01	0.96	0.47	0.01	4,400
Roofers	0.02	0.94	0.38	0.01	135,140
Roustabouts, Oil and Gas	0.01	0.95	0.39	0.01	43,830
Maids and Housekeeping Cleaners	0.02	0.94	0.34	0.01	836,230
Paving, Surfacing, and Tamping Equipment Op.	0.01	0.96	0.29	0.01	43,080
Logging Equipment Operators	0.01	0.95	0.36	0.01	23,720
Motorboat Operators	0.01	0.93	0.39	0.00	2,710
Orderlies	0.00	0.76	0.18	0.00	48,710
Floor Sanders and Finishers	0.00	0.94	0.34	0.00	5,070
Pile Driver Operators	0.00	0.98	0.24	0.00	3,010
Rail-Track Laying and Maintenance Equip. Op.	0.00	0.96	0.27	0.00	18,770
Foundry Mold and Coremakers	0.00	0.95	0.36	0.00	11,780
Water Treatment Plant and System Op.	0.00	0.92	0.44	0.00	120,710
Bridge and Lock Tenders	0.00	0.93	0.39	0.00	3,460
Dredge Operators	0.00	0.99	0.22	0.00	940

Note: Metrics reported as mean of user goal and AI action score.

DEZE BOODSCHAP WORDT VAAK HERHAALD IN DE MEDIA



OPINIESTUK

OPINIE

Dystopische voorspellingen over AI misleiden studiekiezers

AI Leren programmeren geen zin door de snelle opkomst van AI? Dat is te kort door de bocht, zien *Wouter van der Horst* en *Niels Kerssens*.

Niels Kerssens en **Wouter van der Horst**
22 september 2025 • Leestijd 3 minuten

EEN KRITISCHE BLIK OP TECH-GEDREVEN TOEKOMSTSCENARIO'S VOOR HET MBO

We bekijken drie toekomstscenario's voor het mbo die worden gedreven vanuit techno-solutionisme (AI als oplossing voor alles). We hebben use cases uitvergroot die nu al spelen in het onderwijs. We gaan met elkaar in gesprek aan de hand van de volgende vragen:

- Is dit een wenselijk scenario? Waarom wel/waarom niet?
- Lost het een bestaand probleem op in het mbo?
- Welke risico's zie je bij dit scenario?
- Wat is er voor nodig om deze ontwikkeling waardengedreven te sturen vanuit het onderwijs?

DISCUSSIE – 5 MINUTEN

In 2030 monitort een AI-systeem elke klas op studentenwelzijn, van motivatie en prestaties tot welbevinden, en signaleert vroegtijdig gekoppelde risicofactoren aan de docent.

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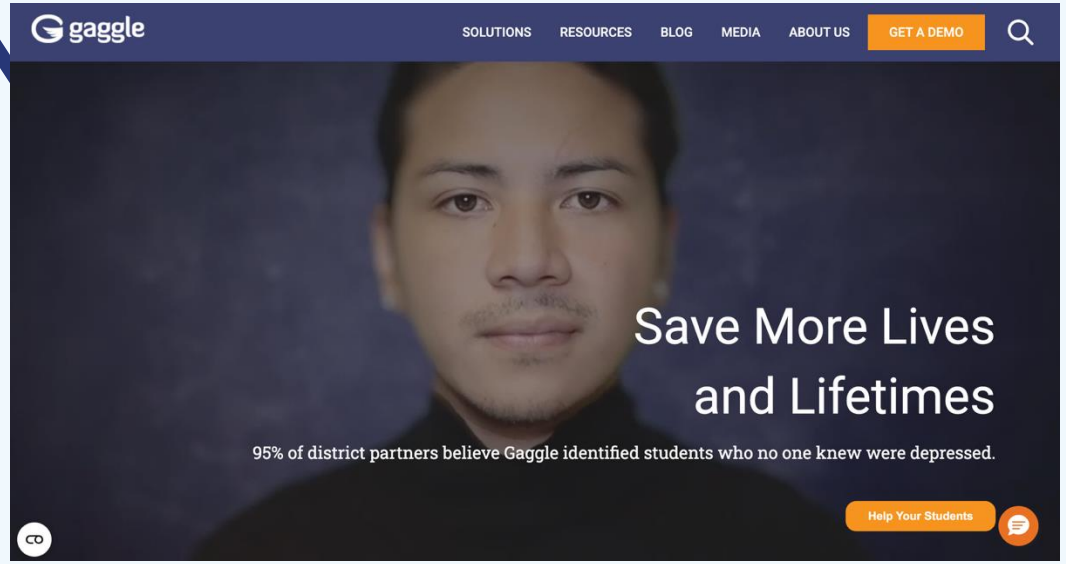

UITWISSELING

DISCUSSIE – 5 MINUTEN

Scenario zorg: In 2030 volgt het mbo-zorgcurriculum de praktijk: 60% van alle basiscontacten (denk aan intakegesprekken en apotheekafspraken) verloopt via AI (chatbots & zorgrobots). Studenten besteden daarom meer lestijd aan samenwerken met AI dan aan direct patiëntcontact.

- Is dit een wenselijk scenario? Waarom wel/waarom niet?
- Lost het een bestaand probleem op in het mbo?
- Welke risico's zie je bij dit scenario?
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UITWISSELING

DISCUSSIE – 5 MINUTEN

Scenario toetsing: In 2030 is met de Coöperatie Examens MBO (CEM) een AI-systeem ontwikkeld dat op basis van de nieuwe kwalificatie-eisen burgerschapscompetenties van studenten meet via het digitale portfolio.

- Is dit een wenselijk scenario? Waarom wel/waarom niet?
- Lost het een bestaand probleem op in het mbo?
- Welke risico's zie je bij dit scenario?
- Wat is er voor nodig om deze ontwikkeling waardengedreven te sturen vanuit het onderwijs?

Burgerschapsonderwijs in een veranderende samenleving

Herijking kwalificatie-eisen burgerschapsonderwijs mbo

UITWISSELING

WAT NEMEN WE MEE?

BEDANKT!