Launching AI Maps© Model 2.0

UMD-LinkUp AI Maps© Project

In Collaboration with Outrigger Group

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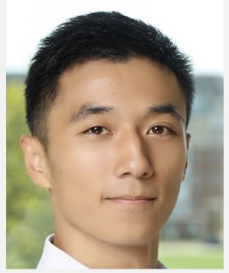

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From AI Maps Model 1.0 to Model 2.0

Overview

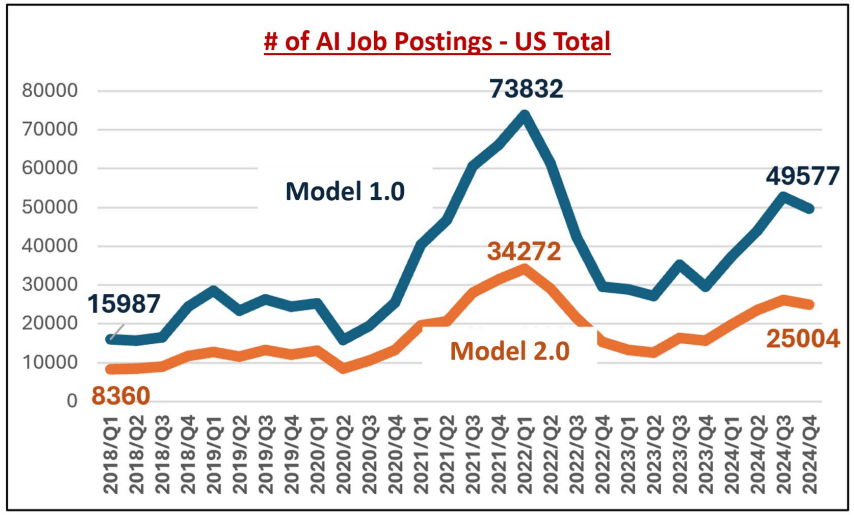
When we launched www.aipmaps.ai in January 2024, our jobs classifier (AI Maps Model 1.0) was developed by fine-tuning one of the best open-source transformer models publicly-available in 2023/H1. A recent test using a newly-developed ground-truth dataset of 12,000 job postings, each labeled by multiple trained students with computer science backgrounds and currently enrolled in a graduate-level STEM program, indicates that Model 1.0 is still the most accurate on a worldwide basis, including in a comparison of approaches used by academics at MIT and elsewhere. However, in terms of transformer-based ML models, 2023 feels like the stone age. This is why – as of October 2025 - we are transitioning to AI Maps Model 2.0, built by fine-tuning one of the world's most powerful open-source LLMs as of 2025/H2. ***The accuracy level of this new classifier – as measured on the complete text of a random sample of 40,000 job postings - is 99.6%.***

The Bad News + The Shockingly Good News

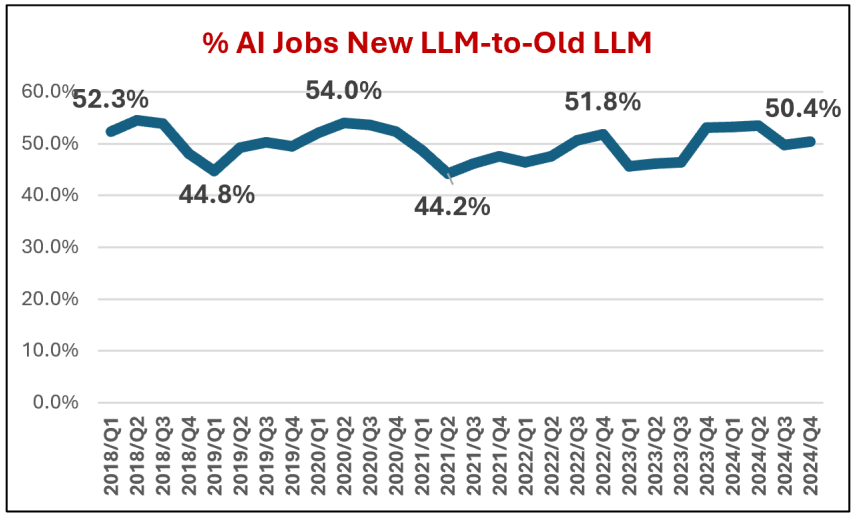
The Bad News….Based on Model 2.0, the number of "True" AI job postings is only about half of those estimated by Model 1.0. Essentially, despite its relative accuracy vis-à-vis all existing approaches, the output of Model 1.0 included about 50% False Positives.

The Shockingly Good News….Since we developed Model 2.0 from scratch (with no memory whatsoever of Model 1.0), we did not know what to expect. Thus, we were pleasantly shocked to find that the New and Old Models track each other extremely closely – with a correlation of around 0.98 or even higher across data for 28-quarters spanning 2018/Q1 through 2024/Q4. This extremely high correlation holds even when we examine estimates for AI Jobs Intensity and AI-to-IT Jobs Intensity as well as number of AI job postings at the sectoral *and* geographic levels. This level of alignment gives us very high confidence that our trend-line conclusions in White Papers 1 and 2 (based on data from Model 1.0) remain entirely valid.

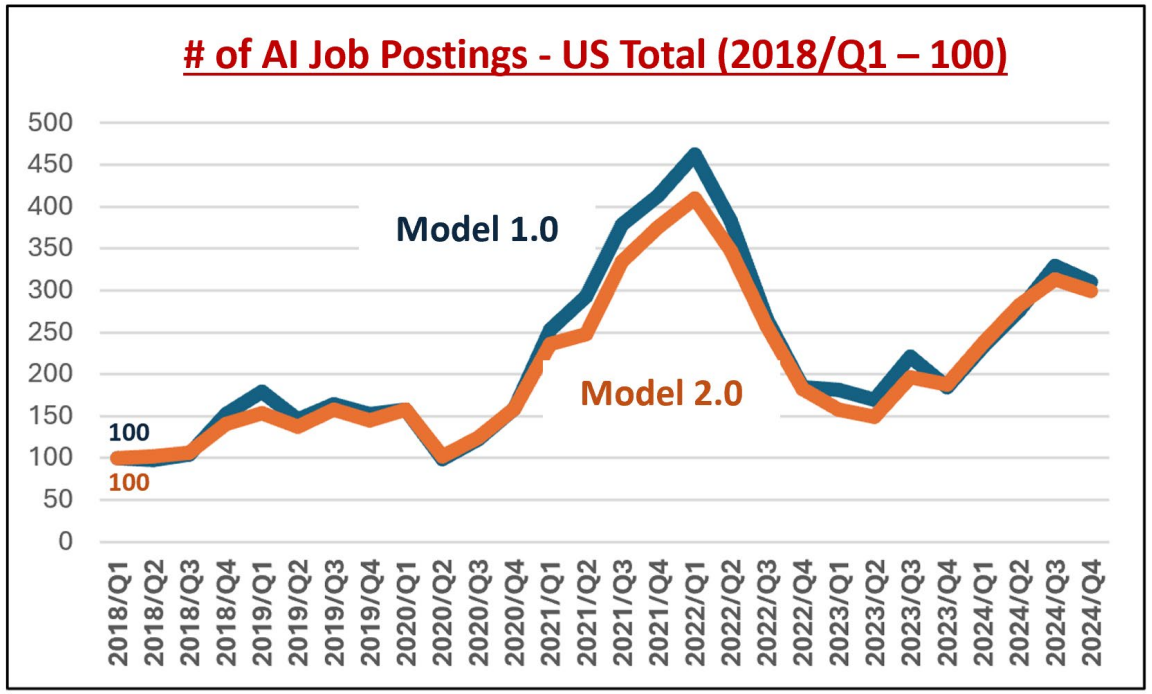
The slides that follow contain the relevant comparisons between the output of the two models.



Correlation between the two models = 0.992



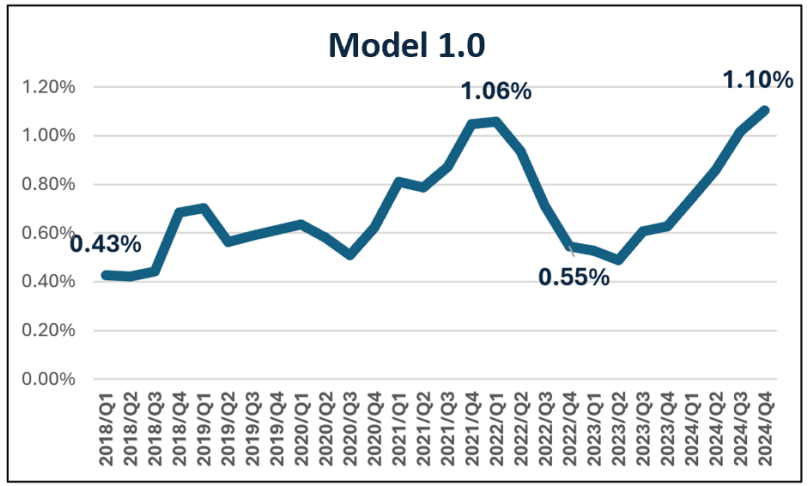
- **Across the 28 quarters (2018/Q1-2024/Q4), Model 2.0 yields about half (49.1%) as many AI-skilled jobs as Model 1.0.**
- **This ratio of about half remains the same throughout the entire 28 quarters.**
- **It seems that Model 2.0 is taking out many False Positives from Model 1.0 (more on this later). But the % of such False Positives remains consistent at roughly 50% throughout this time period.**



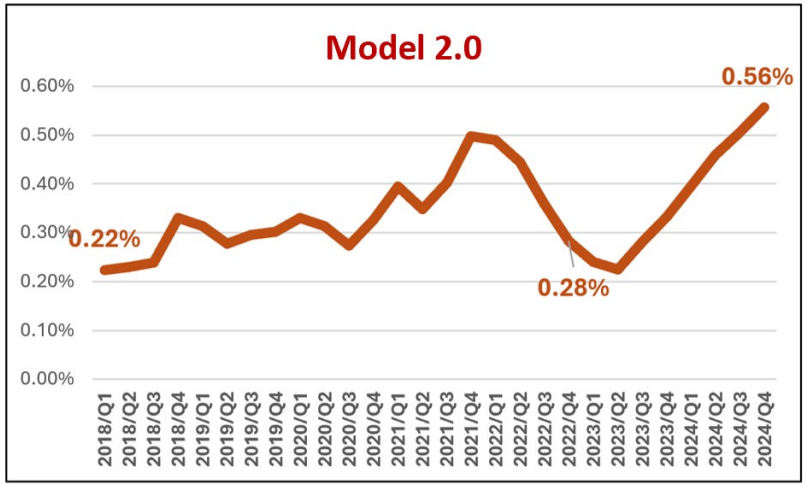
Correlation between the two models = 0.992

- **This graph normalizes the # of AI jobs to the base of 100 for 2018/Q1.**
- **It is pleasantly shocking that the two models track each other extremely closely. Basically, the only difference is in magnitude i.e., Model 1.0 yields 2x the # of AI jobs than Model 2.0.**
- **This means that our White Paper conclusions based on Model 1.0 remain robust and unchanged (except for the absolute # of AI jobs).**

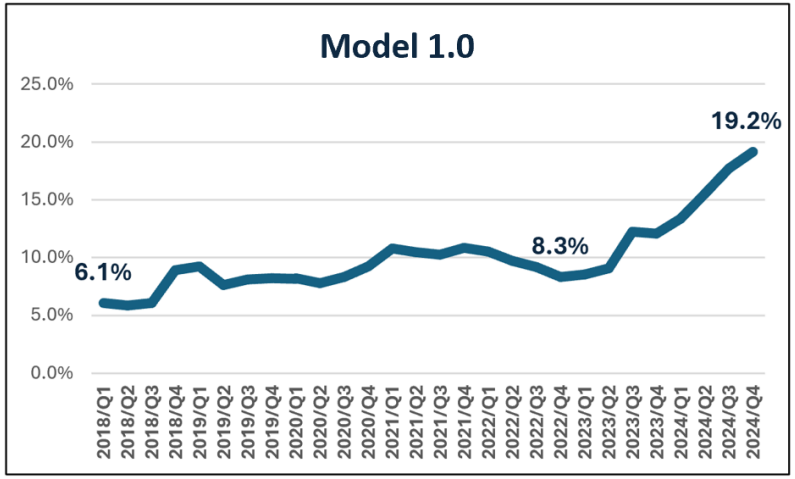
AI Jobs Intensity



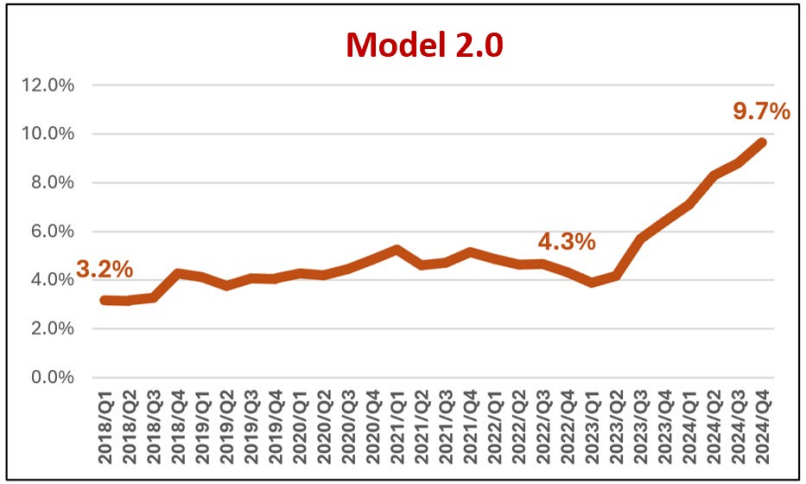
Correlation between the two models = 0.977



AI-to-IT Jobs Intensity



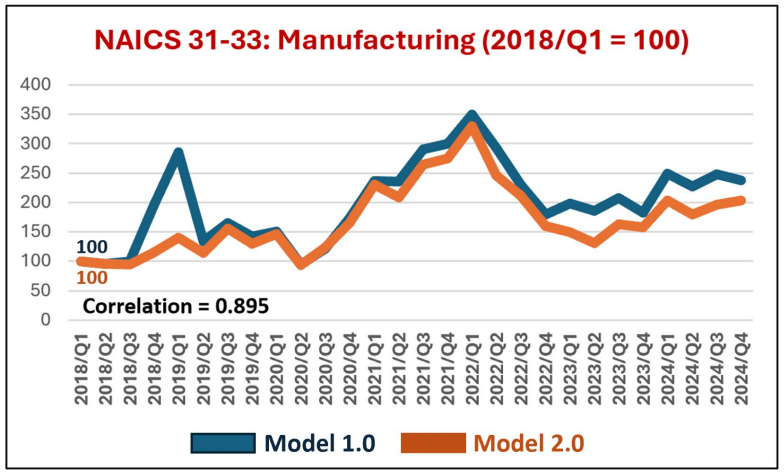
Correlation between the two models = 0.982

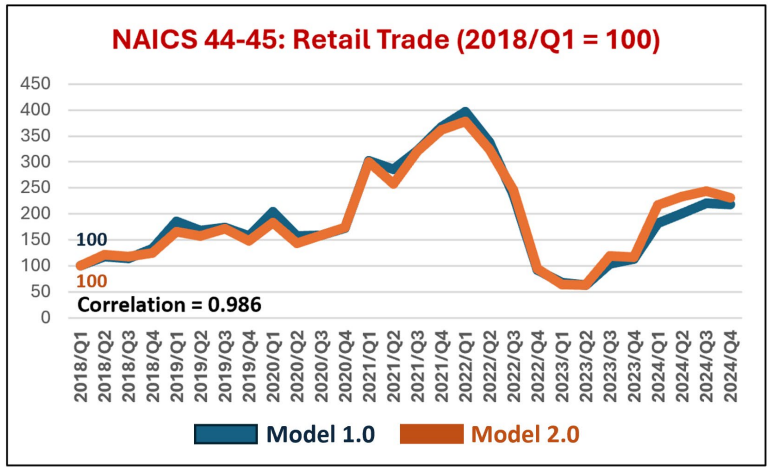


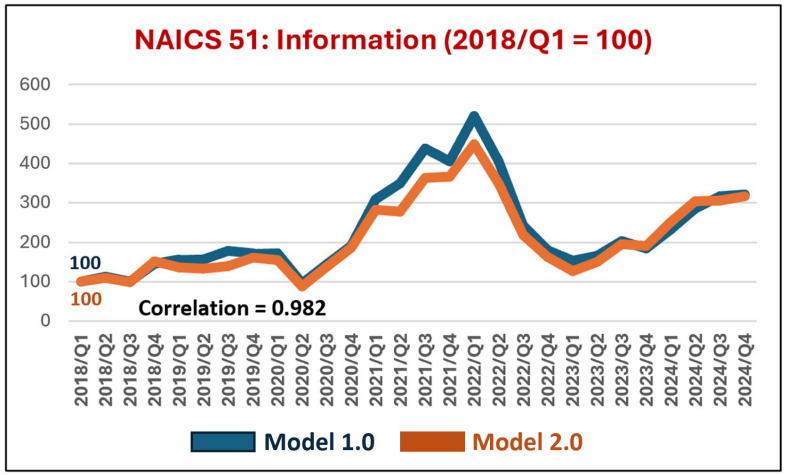
AI Jobs Intensity = Ratio of postings for AI jobs to those for All jobs

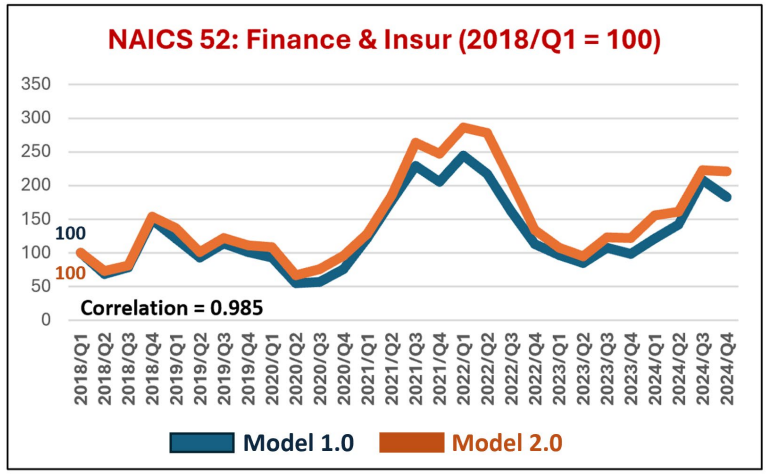
AI-to-IT Jobs Intensity = Ratio of postings for AI jobs to those for IT jobs (defined as those in O*NET Occupation Code 15 "Mathematical and Computer Occupations")

of AI Job Postings – By SECTOR



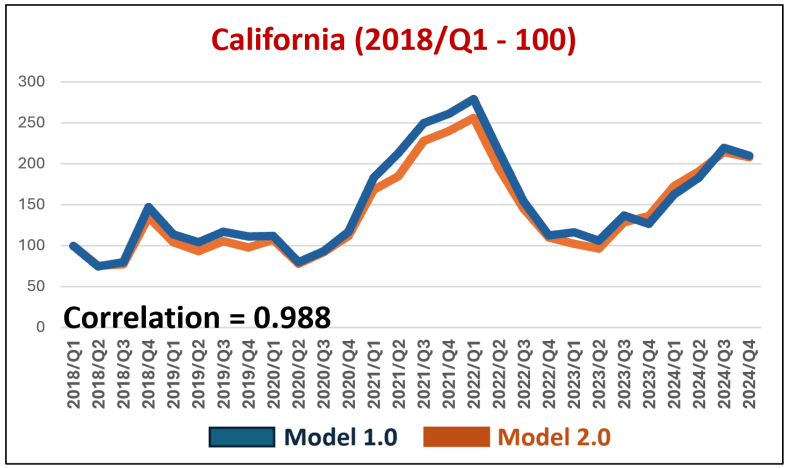


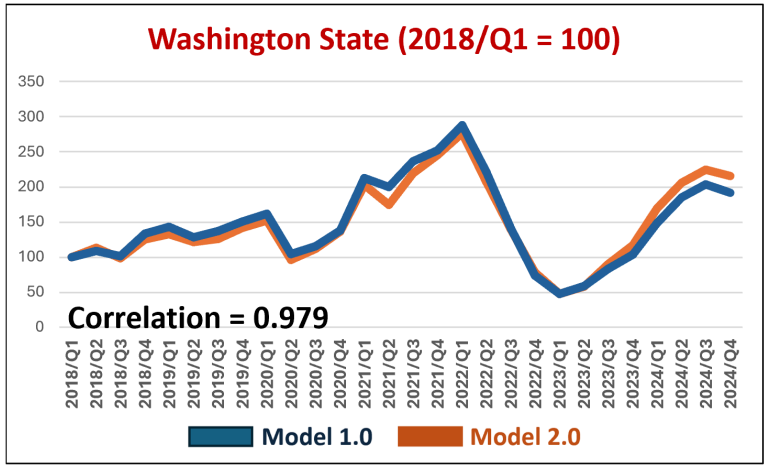


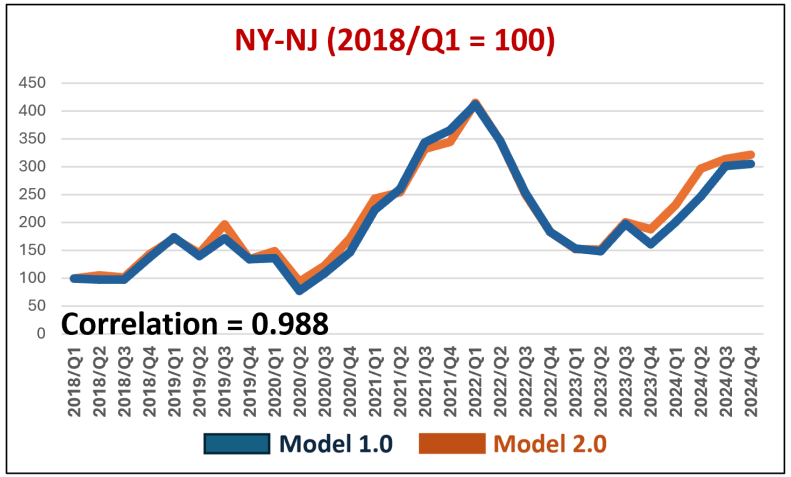


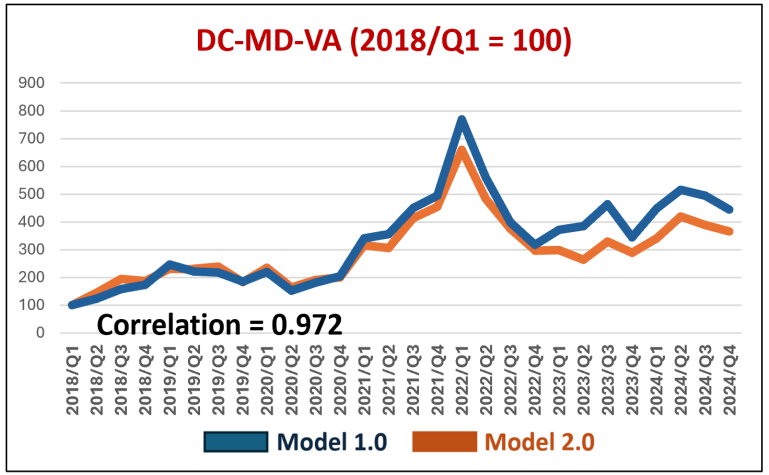
- These graphs compare the # of postings for AI jobs for the two models across four major sectors – normalized to the base of 100 for 2018/Q1.
- Across all four sectors, the two models track each other extremely closely.
- The correlations across the two sets of numbers are extremely high – for every sector.

of AI Job Postings – By GEOGRAPHIC REGION









- These graphs compare the # of postings for AI jobs for the two models across the four largest geographic regions for AI jobs – normalized to the base of 100 for 2018/Q1.
- Across all four regions, the two models track each other extremely closely.
- The correlations across the two sets of numbers are extremely high – for every geographic region.

Data for 2024/Q4

Model 2.0 \ Model 1.0	AI Jobs	Non-AI Jobs	
AI Jobs	24,392	612	25,004
Non-AI Jobs	25,185	444,245	4,467,630
	49,577	4,443,057	All Jobs 4,492,634

- For one quarter (2024/Q4), this chart shows the cross-section of job counts across the two models.
- As is clear, Model 2.0 treats about 50% of the AI jobs as per Model 1.0 as False Positives.