

# How much technical talent is there? A systematic estimate of the ML research pool among 3 million IT consultancy employees

Maximilian Schons, MD<sup>1</sup>

Red Bermejo<sup>4</sup>

Florian Aldehoff-Zeidler<sup>2</sup>

Niccolò Zanichelli<sup>4</sup>

Oliver Evans<sup>4</sup>

Gavin Leech, PhD<sup>3</sup>

Samuel Härgestam<sup>4</sup>

<sup>1</sup>*MxSchons GmbH*   <sup>2</sup>*three backticks (0x60.net)*   <sup>3</sup>*Arb Research*   <sup>4</sup>*Independent*

## Abstract

### Why was this study done?

To determine whether there is latent capacity of capable technical machine learning research talent in the IT Consultancy sector. This talent pool could advance AI risk mitigation and alignment research agendas.

### How was the study conducted?

We systematically searched the internet, global business databases, and conference/paper affiliations for ML consulting firms. Employee LinkedIn resumes were then scored by keyword filters and large-language-model (LLM) classifiers; these signals were combined in a bootstrap probit model to estimate technical ML Research Talent per firm. A subset of companies also completed a 3-day ML engineering & research work trial.

## Results

We screened 2 121 organizations and found 403 to offer broader ML related consulting services. 3 269 000 employees were associated with this sample. The distribution was 284 (70.5%) small (< 100 employees), 76 (18.9%) medium (100–999 employees), 23 (5.7%) large (1 000–9 999 employees), and 20 (5.0%) giant ( $\geq 10\,000$  employees) companies. The 50th percentile aggregate estimate of highly technical ML Research Talent across these organizations was 1 121 (80% CI: 252–3 165).

For our work trial 97 companies were approached, 20 applied, 8 were invited to participate, and 5 of 8 (63%) received at least a conditional recommendation for technical AI safety work. No AI model was able to pass the work trial successfully.

## Limitations and future research

Some companies, particularly in certain geographic regions, might be poorly represented on LinkedIn. More generally, resumes remain an inherently noisy signal of competence and our definition of technical ML research talent might have excluded some competent ML practitioners. For very large companies we often had fewer estimates due to data collection limitations. Future research could incorporate broader LinkedIn data sweeps and public outputs such as papers or code repositories to assess competence further.

## Conclusion

We identify a substantial pool of technically competent ML Research Talent in the low thousands across companies offering ML consulting services. These organizations represent a viable path for expanding capacity for technical AI assurance work.

---

## Conflicts of Interest

The authors report no conflict of interest.

## Author Contributions

Conceptualization: MS, NZ, RB, GL, SH · Methodology: MS, NZ, OE, GL · Software: FA-Z, OE · Formal analysis: MS, FA-Z, OE · Investigation: RB, NZ · Data curation: RB, MS · Visualization: MS, OE · Writing, original draft: MS · Project administration: MS, RB · Supervision: MS, SH

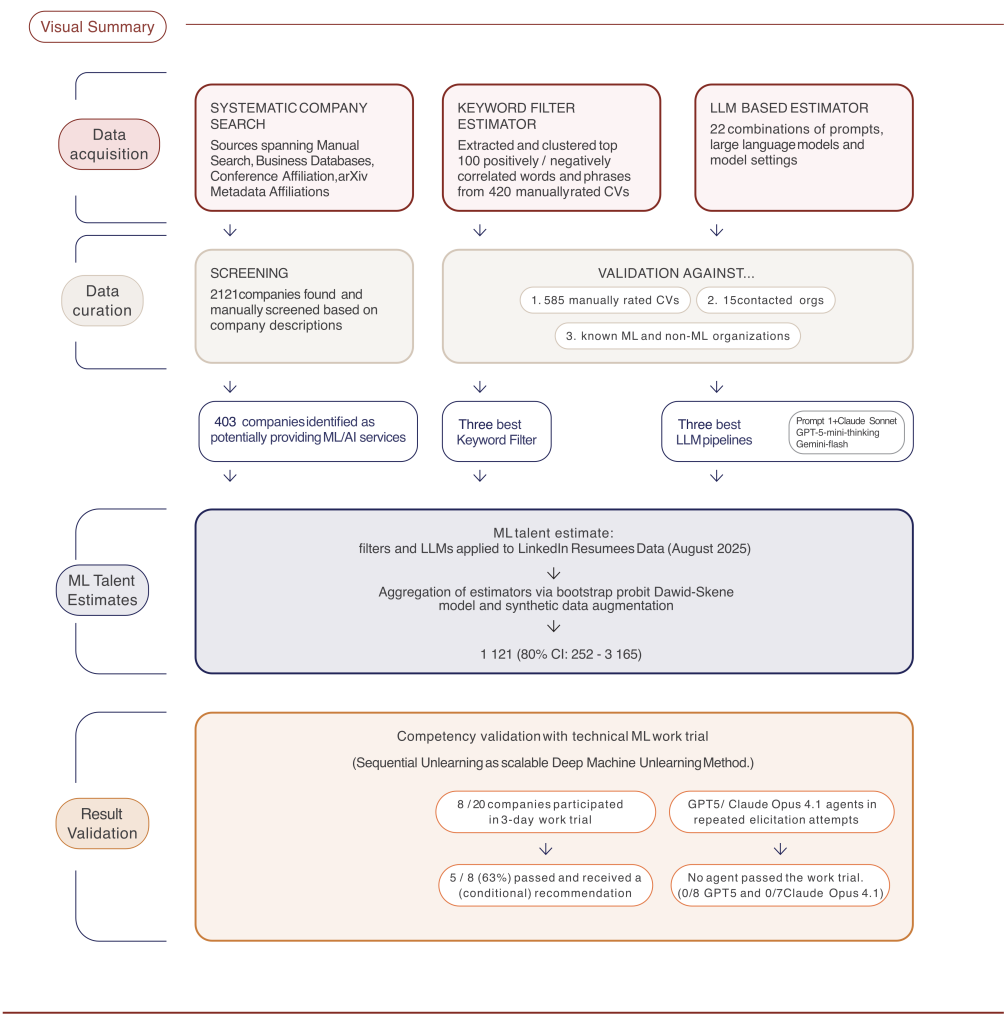
## Acknowledgements

The authors acknowledge Coefficient Giving who funded this study and Lucas Sato, technical staff at METR, who helped run AI agent work trial comparison benchmarks.

## Statement on AI Use

We used large language models (OpenAI GPT-4/5, Google Gemini 2.5 Flash/Pro, and Anthropic Claude 3.7/4/4.5) as described in the method section. Beyond individual prompts, models were used for literature search and to generate early section drafts. Models were also used for data-analysis support. All AI-generated content was thoroughly reviewed, verified, and edited by the authors, who take full responsibility for the final content.

---



Visual summary of the study

## Introduction

The bottleneck for AI safety and alignment work is access to technical talent. Capital expenditure for AI infrastructure is rising at an exceptional rate (see [1–4]), yet outside a handful of frontier labs and academic groups, few organizations can execute difficult alignment and evaluation work at production speed. Existing programs such as MATS ([ML Alignment & Theory Scholars](#)) have supported several hundred scholars since 2021—meaningful, but small relative to the scale of the challenge.

This paper tests whether IT consulting firms can supply a scalable pool of competent engineers and researchers for technical AI assurance. The sector is sizeable, with individual companies employing hundreds of thousands of workers and investing heavily in AI capabilities—for example Accenture’s \$3 billion plan and Capgemini’s multi-year multibillion-euro initiative ([Accenture Newsroom](#), [Capgemini](#)). If a fraction of this workforce can be identified and directed toward alignment tasks, funders and operators could expand capacity rapidly.

We contribute three things. First, we assemble a first-of-its-kind systematic sample of ML consultancies globally; second, we estimate their technical ML research headcount using LinkedIn resumes; and third, we validate capabilities through a multi-day work trial benchmarked against modern LLM agents and established AI/non-AI companies.

## Results

### Systematic Search

Figure 1 provides a flow chart of the inclusion and exclusion of companies at various stages of the project. In total 2 121 companies were identified and screened, eventually leaving 403 companies that promised to provide ML consultancy services. Consultancies were globally distributed, but leaned towards the US and Europe as shown in Figure 2.

The total headcount of current employees based on LinkedIn Sales Navigator was 3 269 000 with the top organizations having hundreds of thousands of employees. In 126/403 (31.3%) of companies we were not able to detect any talent as per our definition.

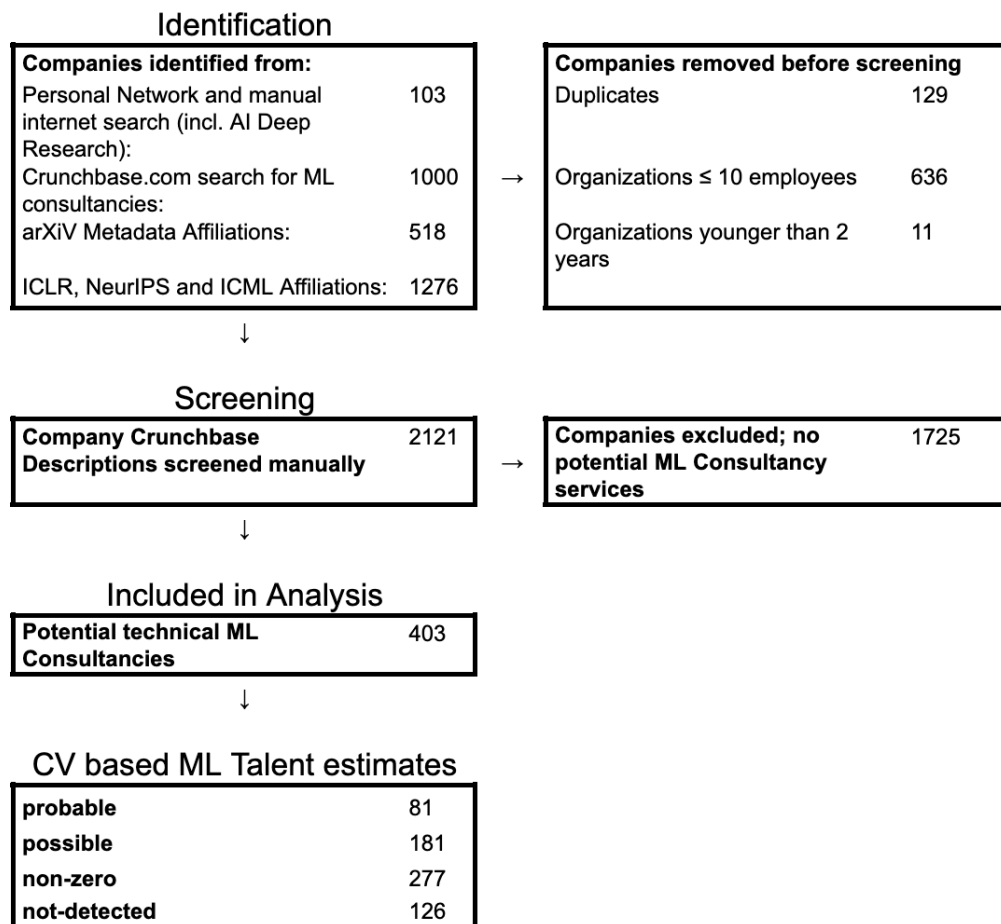
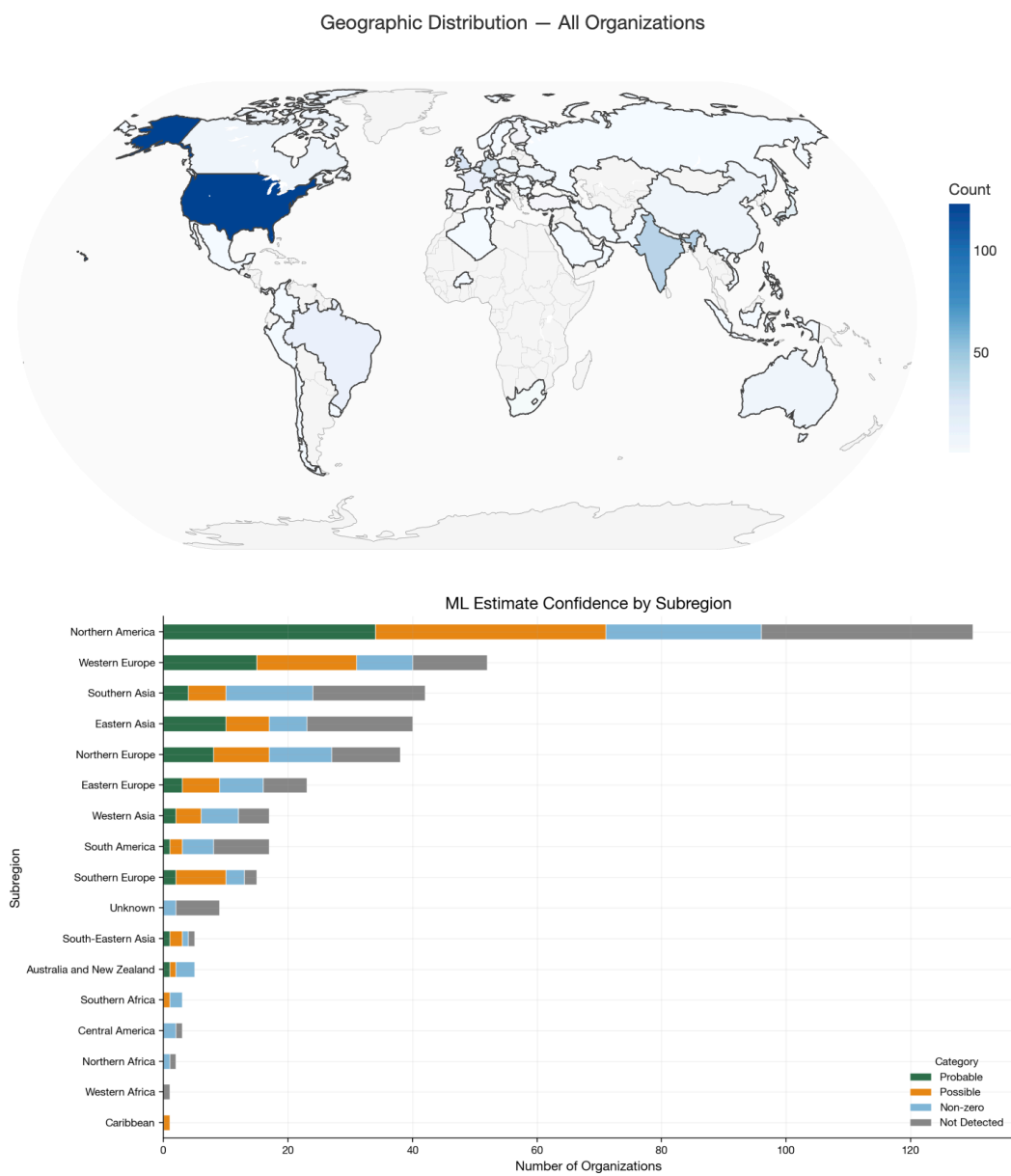


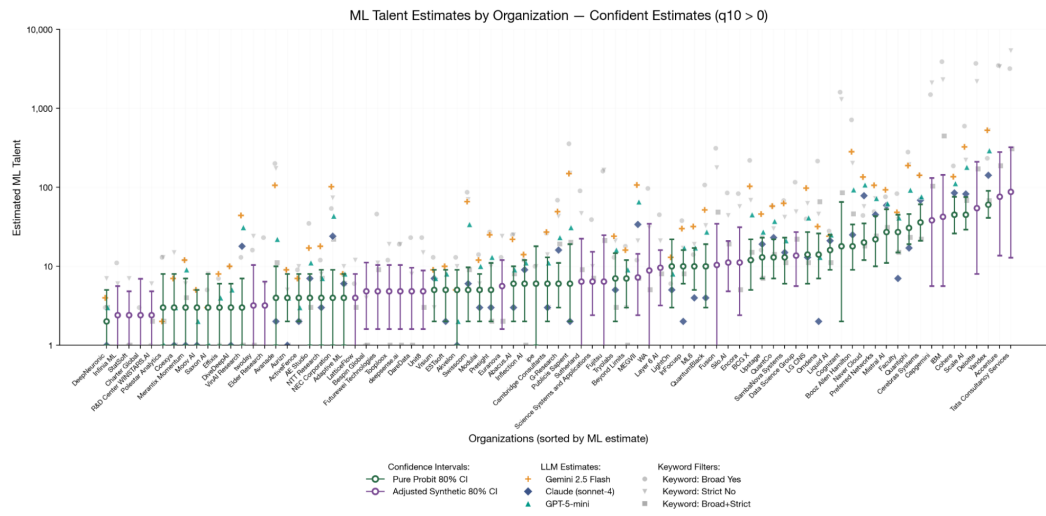
Figure 1. Flow chart of search process



**Figure 2.** A) Map of 403 identified ML Consultancies B) Breakdown by Country and category. Organizations are classified into mutually exclusive confidence categories based on their ML engineer estimate distributions (q10, q50, q90 representing the 10th, 50th, and 90th percentiles).

**Table 1.** Descriptive Statistics on various cohorts of the analysis

| Characteristic                       | All                 | Probable            | Possible           | Non-zero           |
|--------------------------------------|---------------------|---------------------|--------------------|--------------------|
| <b>Total</b>                         |                     |                     |                    |                    |
| Organization N                       | 403 (100.0%)        | 81 (100.0%)         | 100 (100.0%)       | 96 (100.0%)        |
| Total employees                      | 3 269 000           | 2 931 516           | 280 284            | 3 365              |
| Median founding year                 | 2014                | 2014                | 2013               | 2016               |
| Median total employees               | 28                  | 442                 | 90                 | 22                 |
| ML engineers (q50)                   | 1 121 (252 - 3 165) | 890 (218 - 2 522)   | 205 (33 - 537)     | 24 (0 - 99)        |
| ML % of total                        | 0.0% (0.0% - 0.1%)  | 0.0% (0.0% - 0.1%)  | 0.1% (0.0% - 0.2%) | 0.7% (0.0% - 2.9%) |
| <b>Small (&lt; 100 employees)</b>    |                     |                     |                    |                    |
| Organization N                       | 284 (70.5%)         | 19 (23.5%)          | 55 (55.0%)         | 87 (90.6%)         |
| Median total employees               | 15                  | 48                  | 36                 | 20                 |
| ML engineers (q50)                   | 166 (28 - 420)      | 71 (20 - 140)       | 71 (8 - 179)       | 23 (0 - 94)        |
| ML % of total                        | 2.6% (0.4% - 6.5%)  | 6.9% (1.9% - 13.6%) | 2.9% (0.4% - 7.4%) | 1.0% (0.0% - 4.1%) |
| <b>Medium (100-999 employees)</b>    |                     |                     |                    |                    |
| Organization N                       | 76 (18.9%)          | 37 (45.7%)          | 30 (30.0%)         | 9 (9.4%)           |
| Median total employees               | 232                 | 388                 | 215                | 112                |
| ML engineers (q50)                   | 398 (134 - 823)     | 320 (117 - 638)     | 76 (16 - 180)      | 1 (0 - 4)          |
| ML % of total                        | 1.7% (0.6% - 3.5%)  | 2.1% (0.8% - 4.2%)  | 1.0% (0.2% - 2.5%) | 0.1% (0.0% - 0.4%) |
| <b>Large (1,000-9,999 employees)</b> |                     |                     |                    |                    |
| Organization N                       | 23 (5.7%)           | 10 (12.3%)          | 11 (11.0%)         | 0 (0.0%)           |
| Median total employees               | 2 900               | 4 600               | 2 300              |                    |
| ML engineers (q50)                   | 154 (32 - 446)      | 117 (25 - 337)      | 37 (6 - 108)       | 0 (0 - 0)          |
| ML % of total                        | 0.2% (0.0% - 0.5%)  | 0.2% (0.1% - 0.7%)  | 0.1% (0.0% - 0.4%) | n/a                |
| <b>Giant (≥10 000 employees)</b>     |                     |                     |                    |                    |
| Organization N                       | 20 (5.0%)           | 15 (18.5%)          | 4 (4.0%)           | 0 (0.0%)           |
| Median total employees               | 60 000              | 85 000              | 42 500             |                    |
| ML engineers (q50)                   | 401 (57 - 1 474)    | 381 (55 - 1 406)    | 20 (2 - 68)        | 0 (0 - 0)          |
| ML % of total                        | 0.0% (0.0% - 0.0%)  | 0.0% (0.0% - 0.0%)  | 0.0% (0.0% - 0.0%) | n/a                |
| <b>Regions (orgs)</b>                |                     |                     |                    |                    |
| Northern America                     | 130 (32.3%)         | 34 (42.0%)          | 37 (37.0%)         | 25 (26.0%)         |
| Western Europe                       | 52 (12.9%)          | 15 (18.5%)          | 16 (16.0%)         | 9 (9.4%)           |
| Southern Asia                        | 42 (10.4%)          | 4 (4.9%)            | 6 (6.0%)           | 14 (14.6%)         |
| Eastern Asia                         | 40 (9.9%)           | 10 (12.3%)          | 7 (7.0%)           | 6 (6.2%)           |
| Northern Europe                      | 38 (9.4%)           | 8 (9.9%)            | 9 (9.0%)           | 10 (10.4%)         |
| Eastern Europe                       | 23 (5.7%)           | 3 (3.7%)            | 6 (6.0%)           | 7 (7.3%)           |
| Western Asia                         | 17 (4.2%)           | 2 (2.5%)            | 4 (4.0%)           | 6 (6.2%)           |
| South America                        | 17 (4.2%)           | 1 (1.2%)            | 2 (2.0%)           | 5 (5.2%)           |
| Southern Europe                      | 15 (3.7%)           | 2 (2.5%)            | 8 (8.0%)           | 3 (3.1%)           |
| Unknown                              | 9 (2.2%)            | 0 (0.0%)            | 0 (0.0%)           | 2 (2.1%)           |
| Australia and New Zealand            | 5 (1.2%)            | 1 (1.2%)            | 1 (1.0%)           | 3 (3.1%)           |
| South-Eastern Asia                   | 5 (1.2%)            | 1 (1.2%)            | 2 (2.0%)           | 1 (1.0%)           |
| Central America                      | 3 (0.7%)            | 0 (0.0%)            | 0 (0.0%)           | 2 (2.1%)           |
| Southern Africa                      | 3 (0.7%)            | 0 (0.0%)            | 1 (1.0%)           | 2 (2.1%)           |
| Northern Africa                      | 2 (0.5%)            | 0 (0.0%)            | 0 (0.0%)           | 1 (1.0%)           |
| Western Africa                       | 1 (0.2%)            | 0 (0.0%)            | 0 (0.0%)           | 0 (0.0%)           |
| Caribbean                            | 1 (0.2%)            | 0 (0.0%)            | 1 (1.0%)           | 0 (0.0%)           |



**Figure 3.** Individual and aggregated ML Research Talent estimates of 81 organizations among identified technical ML consultancies classified as probable—the 80% confidence interval excludes zero, indicating confident ML presence. When LLM estimates were not available, synthetic data approaches were used (purple).

## ML Research Talent Estimates

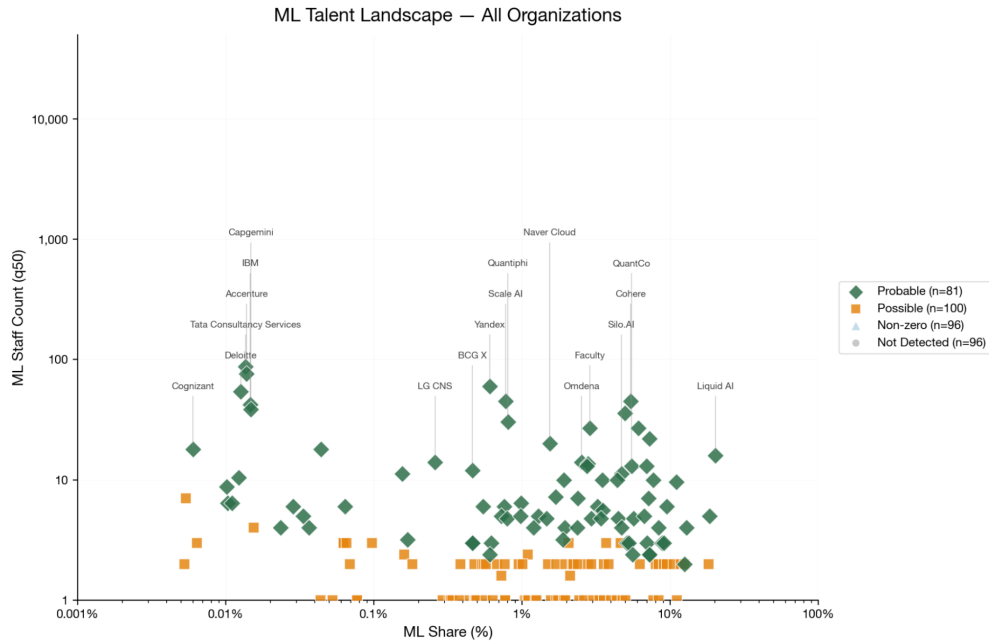
Table 1 presents the aggregated ML Research Talent estimates. For 81/403 (20%) organizations the 80% confidence interval excludes zero, indicating relative confidence for ML Research Talent presence; these firms account for 890 (218–2 522), or 79.4% of all ML Research Talent in our sample (Figure 3). Figure 4 plots the ML staff count against the percentage of technical ML Research Talent. Individual company estimates and categorizations are available in the Supplements.

Our final estimator had a sensitivity of 0.79 and specificity of 0.926, yielding the best accuracy across estimators (0.89), a Positive Likelihood Ratio (LR+) of 10.67, and a Negative Likelihood Ratio (LR-) of 0.23.

As an additional validation step, we applied the selected estimation methods to companies we knew to have high technical ML Research Talent counts and to organizations who certainly don't. The results are presented in the Supplements. Our method arrived at high technical ML Research Talent counts for established AI organizations (e.g., OpenAI, Mistral AI, HuggingFace) and low to zero counts for non-AI companies (e.g., Patagonia, Crocs, Inc., The British Museum) when priors were chosen accordingly.

However, for several established ML organizations—particularly those where LLM-based estimates were unavailable and synthetic imputation was used instead—the pipeline produced estimates that appear implausibly low. For example, Anthropic (2 000 employees) received a median estimate of only 9 (1–26) ML research staff. Similarly, other large organizations relying on synthetic estimates (marked with \* in the Supplements), such as Amazon, Meta, Microsoft, and NVIDIA, yielded lower estimates relative to their known ML research activity. This pattern was most pronounced for companies where the consultancy-calibrated priors (Table 4) were applied to organizations with fundamentally different talent compositions, and where





**Figure 4.** Visualization of ML staff count by share of ML Research Talent of total company employees. A) IT Consultancies B) 18 comparator ML Companies C) 18 non-ML companies

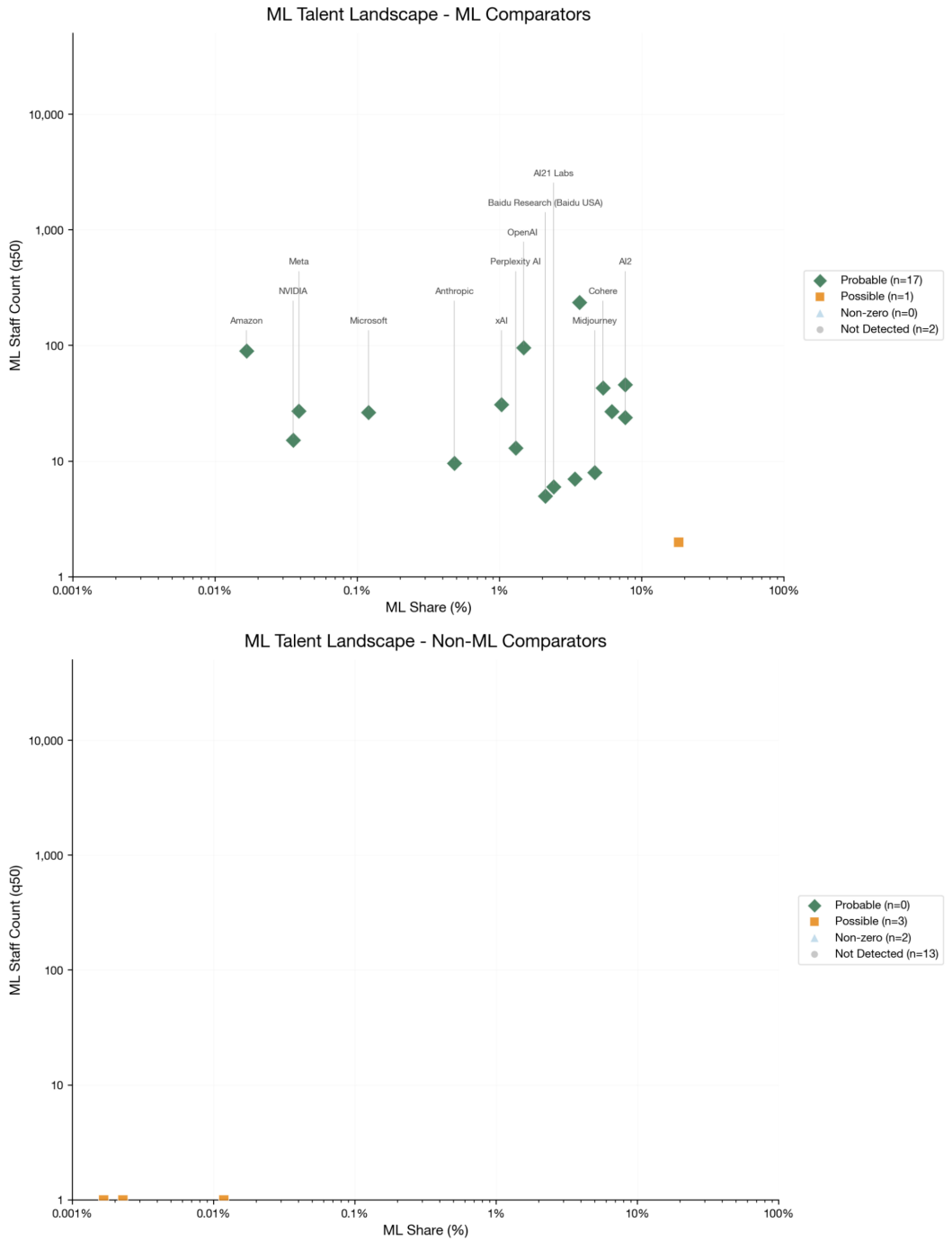
the absence of LLM-based individual CV assessments left the pipeline reliant solely on keyword-derived synthetic annotations.

## Work Trials

In parallel to the talent estimation work, we reached out to a total of 97/403 (24.1%) companies for a 2-month engagement, including a 3-day work trial. 57/97 (59.8%) were not part of the IT consultancies we identified as “ML consultancies” and functioned as additional validation. We were able to get in contact with 47/97 (48.5%) companies and eventually received 20/97 (20.6%) applications. 12 organizations were either rejected or pulled back during the application process, leaving 8 organizations who were offered a work trial. All organizations invited to a work trial performed it during a 4 week period in July to August 2025.

The work trial task was to implement a “Sequential Unlearning” method - a multi-stage wrapper around their existing RMU algorithm that progressively unlearns data in folds - and integrate it into their evaluation codebase, with daily progress updates and a final code/write-up deliverable. The full repository is available in the appendix.

The breakdown of the work trial evaluation is presented in Table 2. Three organizations received a recommendation, two a conditional recommendation, 3/8 (37.5%) no recommendation. Prices varied from \$45 to \$350 per hour, with two organizations providing the work trial free of charge. For confidentiality reasons, individual results, evaluations and company names related to the work trial are not shared with this publication.



In collaboration with a member of the technical staff from METR we let GPT-5 and Claude Opus 4.1 Agents perform multiple runs at the work trial task as well. After some elicitation, agents were evaluated by the same criteria. All agents scored between 30 and 40% on our work trial, resulting in no recommendation.

**Table 2.** Overview of work trial results. Most agents implemented a somewhat well-documented Sequential Unlearning, integrated it into the pipeline, and provided usable configs with coherent write-ups. However, only a small subset executed any unlearning to completion, and none followed through with RTT evaluation.

|                  | No Recommendation<br>(<50%)                                 | Conditional<br>Recommendation<br>(50-70%) | Recommendation<br>(>70%)   |
|------------------|---|---|--|
| ML Consultancies | 3 / 8 (37.5%)   | 2 / 8 (25%)                               | 3 / 8 (37.5%)<br>Note: all three<br>organizations scored<br>>90% |
| AI Agents        | ChatGPT-5: 8 / 8 (100%)<br>Claude Opus 4.1: 8 / 8<br>(100%) | -   | -  |

## Discussion

To our knowledge, this is the first systematic assessment of the “dormant” pool of technical ML Research Talent inside IT consultancies. We introduce a transparent estimation pipeline for identifying high-quality ML practitioners, and we validate it via multiple modalities: validation datasets for screening and estimation, organization-level outreach, and targeted work trials. While our work was motivated by advancing AI assurance work, these methods offer a pragmatic general map of where skilled ML capacity might exist.

Our global sweep estimated roughly 1 100 individuals with robust AI/ML profiles across 403 consultancies. Final ML Research Talent estimates aligned with our work-trial experiences and conversations with various IT consultants. Organizations concentrated in the US and Europe. Diversified conglomerates whose services span far beyond ML/AI are one of the reasons why overall ML Research Talent density with  $\sim 0.01\%$  is low. At the level of individual firms, however, the picture is heterogeneous, with skilled technical ML staff ranging up to 20%. Funders and program managers should therefore avoid treating “consultancies” as a homogeneous class and require careful targeting of the right sub-units.

AI agents are continuously advancing, but at least in our analysis they fell far behind consultancies, despite repeated expert elicitation. This suggests that the right consultancies can deliver useful ML R&D outputs we can’t replace with AI today. Activation requires deliberate scoping, credible sponsorship, and (often) smaller, faster contracting paths.

Our findings should be interpreted with several caveats. First, we used a particular definition of ML Research Talent that could exclude competent practitioners in adjacent domains such as ML Ops. The systematic search was English-only and anchored to Crunchbase and LinkedIn, likely underrepresenting non-Western markets and firms with limited public footprints. Our final estimators, with a positive likelihood ratio of  $\sim 11$  and a negative likelihood ratio of 0.23, remain an imperfect signal, particularly at the scale of over 3 million assessed individuals.

For several established ML organizations—where LLM-based estimates were unavailable and synthetic imputation was used instead—the pipeline produced implausibly low estimates (e.g., Anthropic: 9 of 2 000 employees). This reflects a mismatch between our consultancy-calibrated priors (Table 4) and the fundamentally higher talent density at frontier labs. Future applications to such organizations would benefit from domain-specific priors or full LLM-based CV evaluation.

Our work trial was an important validation step, but resumes remain an inherently noisy proxy for competence and we were not able to systematically connect individual CVs to public artifacts (e.g., publications, GitHub/GitLab) at scale. The work-trial component involved only 20 organizations, a single 3-day task, and no true control arm of lab/academic researchers. We instead leveraged state-of-the-art AI coding tools. Through conducting the work trials a consistent operational lesson also emerged: even highly competent consultancies prefer an external “vision holder” (e.g., a senior AI-alignment researcher) to specify outcomes and own the research direction. Smaller organizations we engaged tended to cite capacity chal-

lenges, larger organizations minimum contract sizes.

Within these limits, we find clear “proof of existence” for technical ML practitioners who can execute a challenging technical ML task to the highest levels of satisfaction. This should be an encouragement for funders and program managers in the AI assurance and general AI space to consider this accelerated path of increasing capacity for AI safety projects.

## Methods

### Systematic company search

Over the course of June to August 2025 we identified companies via

1. personal network recommendations,
2. unstructured web search with 2 independent research assistants (leveraging Deep Research functionalities of LLMs),
3. extracting arXiv affiliation metadata,
4. extracting ICLR / ICML / NeurIPS affiliations back to 2019, and
5. Crunchbase.com database keyword search.

The details for the search strategy are available in the supplements (see [Search Strategies](#)). All company names identified in steps 1 to 4 were searched for and exported from Crunchbase. We screened all company descriptions provided by Crunchbase for relevance to technical ML consultancy services, using Claude Sonnet 3.7 and a human validator. Organizations with fewer than 10 staff members on Crunchbase (and later LinkedIn exports), or younger than 2 years were excluded. The date of Crunchbase data extraction for final analysis was 8th of August 2025.

There is an emerging literature on the use of LinkedIn for labor measurement. LinkedIn has over 1.2 billion profiles and we expect it to be the most representative data source available ([LinkedIn Statistics for Professionals](#) [8]). Comparative studies show that LinkedIn-derived indicators can correlate well with official statistics while exhibiting selection effects by country, age, and sector ([SpringerOpen](#), [Oxford Academic](#), [World Bank](#)).

### Access to staff LinkedIn Resumes for evaluation

To assess a company’s staff technical ML capabilities we decided to evaluate respective LinkedIn resumes. We used two approaches: access via LinkedIn’s own Sales Navigator Recruiter Lite and Brightdata’s LinkedIn data. The former provided up-to-date information from LinkedIn, but did only allow for simple filtering and keyword search. The latter enabled us to screen CVs more comprehensively with LLMs, but did not always represent current LinkedIn data and had to exclude extremely large companies with more than 50,000 employees.

### Methodology of Resume Evaluation Validation

According to our data constraints we designed and validated two complementary evaluation pipelines. One keyword based, another LLM prompt based.

First, we created a comprehensive validation dataset with a total of 585 CVs extracted from LinkedIn. Two independent human reviewers rated all CVs against our definition of technical ML Research Talent as either yes or no (see Supplements). The examples included randomly selected individuals from IT consulting firms and work trial consultancies. We also included random sets selected from small-scale technical AI Alignment organizations and AI labs like OpenAI, Anthropic and Google to ensure sufficient positive examples.

Based on 421 of the rated CVs we extracted the top 100 positively and negatively associated keywords (see supplements). Features were selected after a manual sanity pass to drop misleading tokens (e.g., organization names or cities) at a “strict” and “broad” level for both positive and negative terms. “Broad” selected terms with a `discriminative_score`  $\geq 0.8$  AND raw category specificity  $\geq 0.7$ , “strict” selected at a `discriminative_score`  $\geq 0.9$  AND raw category specificity  $\geq 0.8$ . The minimum frequency across all CVs for a keyword was five. In parallel we created two evaluation LLM prompts (see code repository) we tested with different models and temperature settings at 0 or default (usually 1.0 or 0.7; at the time of testing gpt-5 models did not support a temperature parameter)<sup>1</sup>. Models included:

- Google: gemini-2.5-pro, gemini-2.5-flash and gemini-2.5-flash-lite
- OpenAI: gpt-5-thinking-2025-08-07, gpt-5-mini-thinking-2025-08-07, gpt-5-nano-thinking-2025-08-07
- Anthropic: opus-4-1-20250805, sonnet-4-20250514

All permutations of keyword filters and all permutations of LLMs were validated against the full 585 CVs. The top three performing filters and top performing model per LLM provider were selected: `broad_yes`, `strict_no`, and `broad_yes_strict_no` for keywords. For LLMs, we selected prompt 1 and gemini-2.5-flash, sonnet-4-20250514, and gpt-5-mini-thinking-2025-08-07 as they provided robust results while being relatively fast and cheap (see Table 3 for keywords and prompt). Exploratory results for worktrial companies aligned with both company statements about their internal capacity as well as us reviewing CVs manually.

---

<sup>1</sup>Temperature controls the randomness of an LLM’s text generation. Lower values (e.g., 0.1) make outputs more deterministic and focused, while higher values (e.g., 0.9) make them more creative and unpredictable.

Table 3. Selected Keywords and prompts

| Highly Skilled technical ML Research Talent (Definition)   | Keyword Filter  | LLM Prompt  |
|--|---|---|
| Professionals who can: <ul style="list-style-type: none"> <li>• Train models from scratch: Comfortable implementing and training transformer architectures like GPT-2 end-to-end, including loss calculation, attention mechanisms, and training loops</li> <li>• Work from specs to code: Take a method specification and build a working implementation, handling data pipelines, model internals, and distributed training setups</li> <li>• Debug model behavior: Diagnose and isolate root causes when training goes wrong or models behave unexpectedly</li> <li>• Engage with research: Read papers, understand novel approaches, and translate ideas into concrete implementation plans</li> <li>• Communicate clearly: Report progress, challenges, and solutions in accessible terms</li> <li>• Evidence: Public GitHub repos, papers/blog posts, or other forms of demonstrated experience</li> </ul> | ML Selection<br>("machine learning" OR "machine-learning" OR "ML" OR "deep learning" OR "deep-learning", "reinforcement learning" OR "reinforcement-learning" OR "RL") AND<br>Broad_yes (optional)<br>("augmented generation" OR "agent reinforcement" OR "mats scholar" OR "mats" OR "research scientist" OR "evals" OR "interpretability" OR "feature engineering" OR "research intern" OR "candidate" OR "graduate research assistant" OR "science institute" OR "staff research scientist" OR "doctor")<br>Strict_no (optional)<br>NOT ("certificate" OR "programmer" OR "council" OR "companies" OR "capital" OR "proven track record" OR "pilot" OR "money" OR "specialist" OR "chief" OR "udemy" OR "track record" OR "customer" OR "management" OR "today" OR "cross functional" OR "administrator" OR "excellence" OR "commerce" OR "linkedin" OR "leader" OR "incident" OR "tier" OR "brand" OR "investment" OR "hr" OR "sites" OR "offerings" OR "prior" OR "centers" OR "advising" OR "certified information" OR "key responsibilities" OR "master data" OR "anti" OR "deadlines" OR "physiology" OR "carbon" OR "impacts" OR "certified machine" OR "qualification") | Question: Could this person design and implement complex ML architectures from scratch (e.g., transformers, VAEs, diffusion models) and is qualified for technical AI engineering or research? Quick Check:<br>GOOD FIT - Look for:<br>- Built neural networks or created novel architectures<br>- Deep understanding demonstrated through: custom loss functions, attention mechanisms, or architecture modifications<br>- Advanced degree in ML WITH thesis/research on model architecture (not just applications)<br>- Implemented training algorithms or frameworks from scratch (not using existing libraries)<br>- LLM/RLHF experience - distinguish between using vs. building these systems<br>NOT A FIT - Reject if they're primarily:<br>- Using pre-built models (even advanced ones like fine-tuning LLMs)<br>- Data Scientists (dashboards, analytics, A/B tests)<br>- MLOps/DevOps without architecture design<br>- Hardware optimization for ML (GPU programming) without model design<br>- Applied ML without evidence of understanding underlying math/algorithms<br>Output: [ACCEPT/REJECT] |

Data was collected in the time from 1st – 15th of August. For the keyword analysis, we manually selected the company name on LinkedIn's Sales Navigator Recruiter Lite and pasted the respective keyword combinations together with the shared search term ("machine learning" OR "machine-learning" OR "ML" OR "deep learning" OR "deep-learning", "reinforcement learning" OR "reinforcement-learning" OR "RL"). The number of total company and filter specific hits were manually transferred into our database. LinkedIn's public interface rounds counts (e.g., >1,000 results rounded; >100k rounded to 10k) and offers limited public API access, constraining programmatic precision at large scales.

For the LLM evaluation, we sourced all company profiles via Bright Data ([bright-data.com](https://brightdata.com)) for organizations with fewer than 25,000 LinkedIn profiles in the previous filter search. Data was processed by selected models with Prompt 1 and results



cleaned from hallucinated profiles. We ran the evaluation of approximately 250 000 profiles using the batching APIs of the three models. LLM estimates were excluded if the headcount was off by a factor of more than 3 compared to the LinkedIn Sales Navigator Recruiter Lite data.

### **Aggregation of individual estimates**

We estimated technical ML headcount using a bootstrap multivariate probit model that combines six imperfect annotators: three keyword filters (broad, strict, and combined) and three LLM classifiers (Gemini 2.5 Flash, GPT-5 Mini, Claude Sonnet 4) which each produce a binary label for each employee (ML expert / not an ML expert). Our approach is based on the Dawid-Skene model, but rather than assuming independent annotator errors, our approach models correlated mistakes through a multivariate normal latent structure, capturing, for instance, when multiple LLMs fail on the same edge cases. The model assumes each annotator's binary decision arises from thresholding a latent continuous score in probit space (inverse standard normal CDF), allowing us to model correlations in the underlying decision-making process rather than just in the binary outcomes. The full pipeline is illustrated in Figure 5 and code available in the repository.

From 585 manually-labeled validation CVs (153 ML experts, 432 non-ML), we estimated each annotator's sensitivity and specificity via confusion matrices, and their pairwise error correlations via tetrachoric correlation, which estimates the correlation between latent continuous variables underlying binary annotations, consistent with the probit model's assumption that binary labels arise from thresholding latent Gaussian scores. (see Figure 5). The combined probit model achieved the highest accuracy (0.89) with sensitivity of 0.79 and specificity of 0.93, outperforming any individual annotator.

For inference, we compute the posterior probability that each employee is a true ML expert given their pattern of annotations across all six methods. The likelihood of observing a particular annotation pattern under each true label class (ML expert vs. non-expert) is computed as a multivariate normal orthant probability—the probability mass in the region of latent space corresponding to that binary pattern. The posterior probability is then obtained via Bayes' theorem, combining these likelihoods with company-size-stratified Beta priors on ML Research Talent prevalence.

**Table 4.** Company-size-stratified Beta priors on ML Research Talent prevalence

| Organization Type                        | Company Size | Beta Prior        | Mean  |
|--|--------------|-------------------|-------|
| Consulting & Comparator ML Organisations | < 100        | Beta(2.4, 21.7)   | 10%   |
| Consulting & Comparator ML Organisations | 100–1,000    | Beta(3.0, 57.0)   | 5%    |
| Consulting & Comparator ML Organisations | 1,000–10,000 | Beta(1.6, 154.8)  | 1%    |
| Consulting & Comparator ML Organisations | > 10,000     | Beta(1.0, 999.0)  | 0.1%  |
| Comparator Non-ML                        | All sizes    | Beta(1.0, 9999.0) | 0.01% |
| All (unknown size)                       | Unknown      | Beta(1.6, 154.8)  | 1%    |

For organizations with only aggregate LinkedIn keyword counts (due to lack of access or substantial headcount discrepancies), we generate synthetic employee-level annotations using a Gaussian copula that preserves the estimated correlation structure between keyword filters while matching company-level prevalences (aggregate counts divided by total headcount). This approach assumes that the latent correlation structure estimated from validation data generalizes across companies, allowing us to create realistic synthetic annotation patterns that can be processed by the same probit model as real employee-level data. These synthetic annotations are used only when real employee-level data is unavailable, enabling unified estimation across all companies. Synthetic estimates were adjusted by a factor of 0.5 based on systematic comparison with real-data estimates for companies where both were available (see Figure 6).

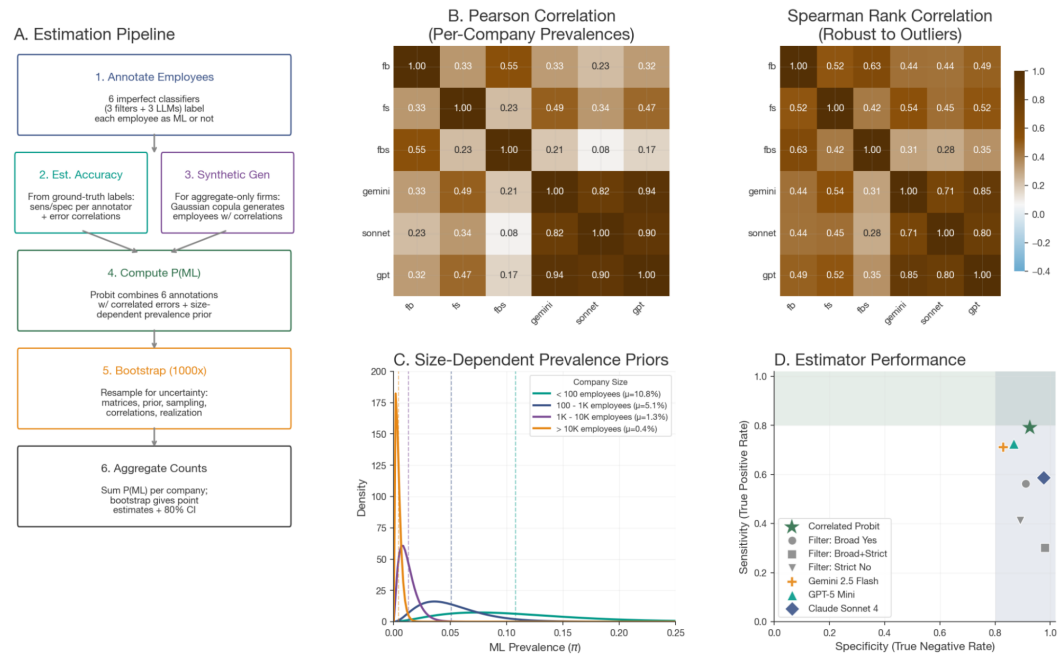
The bootstrap procedure (1,000 iterations) captures five sources of uncertainty: (1) confusion matrix estimation from resampled validation data, (2) prior uncertainty via Beta sampling, (3) within-company sampling variation, (4) correlation structure uncertainty from resampled test data, and (5) realization uncertainty through Bernoulli draws of true labels. The bootstrap procedure works by running the full pipeline many times, and for each source of uncertainty, resampling (with replacement) the relevant population or re-drawing from the relevant distribution. The resulting distribution yields point estimates (means) and intervals (10th/90th percentiles) for company-level headcounts.

We defined subsets for technical ML Research Talent-dense organizations as follows: Organizations are classified into mutually exclusive confidence categories based on their ML engineer estimate distributions (q10, q50, q90 representing the 10th, 50th, and 90th percentiles):

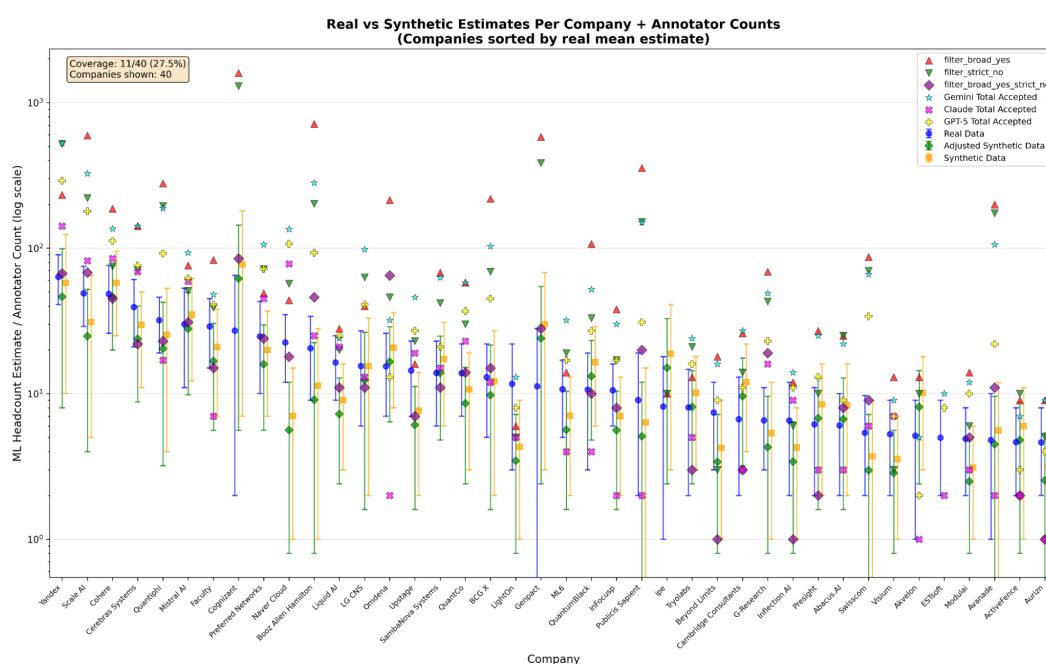
- **Probable:**  $q10 > 0$  — The 80% confidence interval excludes zero, indicating confident ML presence
- **Possible:**  $q50 > 0$  and  $q10 = 0$  — The central estimate is positive but the confidence interval includes zero

- **Non-zero:**  $q_{90} > 0$  and  $q_{50} = 0$  — Only the upper bound is positive; the central estimate is zero
- **Not Detected:**  $q_{90} = q_{50} = q_{10} = 0$  — All estimates are zero, indicating no ML signal detected

Pure probit estimates are used when available; otherwise, adjusted synthetic estimates are used.



**Figure 6.** Comparison of Real and Synthetic estimates per company.



**Figure 7.** Methodology overview diagram. A) Pipeline overview B) Visualization of the distribution prior of the bootstrap probit Dawid-Skene model C) Sensitivity vs Specificity across all estimators, including final correlated probit.

## Interviews and Work Trials

In parallel to the systematic search and ML Research Talent estimates, we reached out to organizations for a work trial and consecutive two-month technical AI alignment project to be funded by Coefficient Giving.

Companies were approached with a comprehensive project description. Applications were scored by at least two reviewers for competence, scale and maturity (see supplements). We followed up at least two times using various channels such as contact emails / forms, LinkedIn outreach, and personal connections. Strong applications were invited to interviews and eventually to participate in a paid 3-day work trial. Compensation happened according to the respective rates of the consultancy.

The work trial consisted of a three day 2 FTE implementation of an adapted unlearning method<sup>2</sup> (research code repository in the Supplements). Each team was provided with a Slack channel to discuss progress on the task and point out any upcoming questions / issues. The final submission, including git repository, end-of-work-trial report, and group chat history was then scored on a 0 to 3 scale by two independent ML engineers / researchers on a weighted metric, including Technical Correctness (40 %), Experimental Rigor & Reproducibility (25 %), Code Quality & Maintainability (15 %), Communication & Insight (15 %), and Bonus Innovation / Extras (up to 10%) (see Supplements for the evaluation metrics). Final scores were averaged. As a control we asked a technical staff member from METR to let modern AI coding agents (Claude Code, GPT-5) execute the task as well.

---

<sup>2</sup>In short, we asked consultancies to implement Qian et al. [12] in the RTT codebase by Deeb et al. [13].

## References

1. Alphabet Investor Relations. Google 10-K Annual Report 2024. <https://abc.xyz/assets/77/51/9841ad5c4fbe85b4440c47a4df8d/goog-10-k-2024.pdf>
2. Microsoft Investor Relations. FY 2024 Q4 Earnings. <https://www.microsoft.com/en-us/investor/events/fy-2024/earnings-fy-2024-q4>
3. Meta Investor Relations. Third Quarter 2024 Results. <https://investor.atmeta.com/investor-news/press-release-details/2024/Meta-Reports-Third-Quarter-2024-Results/default.aspx>
4. About Amazon. Amazon AWS Anthropic AI. <https://www.aboutamazon.com/news/company-news/amazon-aws-anthropic-ai>
5. ML Alignment Theory Scholars (MATS) Program. <https://www.matsprogram.org/>
6. Accenture Newsroom. Accenture to invest \$3 billion in AI. <https://newsroom.accenture.com/news/2023/accenture-to-invest-3-billion-in-ai-to-accelerate-clients-reinvention>
7. Capgemini. Augmented Engineering Offerings Powered by Gen AI. <https://www.capgemini.com/news/press-releases/capgemini-announces-augmented-engineering-offerings-powered-by-gen-ai/>
8. LinkedIn Statistics for Professionals. <https://www.linkedin.com/pulse/50-linkedin-statistics-every-professional-should-ti9ue/>
9. Fatehkia M, et al. Mapping socioeconomic indicators using social media advertising data. *EPJ Data Science*. 2021. <https://epjdatascience.springeropen.com/articles/10.1140/epjds/s13688-021-00294-7>
10. Barkay N, et al. Coverage properties of LinkedIn data. *Journal of Survey Statistics and Methodology*. 2024;12(5):1200. <https://academic.oup.com/jssam/article/12/5/1200/7728213>
11. World Bank Group. LinkedIn Data Insights: Jobs, Skills and Migration Trends. <https://documents1.worldbank.org/curated/en/827991542143093021/pdf/World-Bank-Group-LinkedIn-Data-Insights-Jobs-Skills-and-Migration-Trends-Methodology-and-Validation-Results.pdf>
12. Qian J, et al. 2025. arXiv:2505.09500. <https://arxiv.org/abs/2505.09500>
13. Deeb S, et al. 2024. arXiv:2410.08827. <https://arxiv.org/html/2410.08827v1>

## Supplements

### Repository

The following repository includes all analysis and work trial code. It only includes partial information on the exported profiles.

<https://github.com/MxSchons-GmbH/consultancy-ml-research-talent-estimates>

### Extended Flow Chart

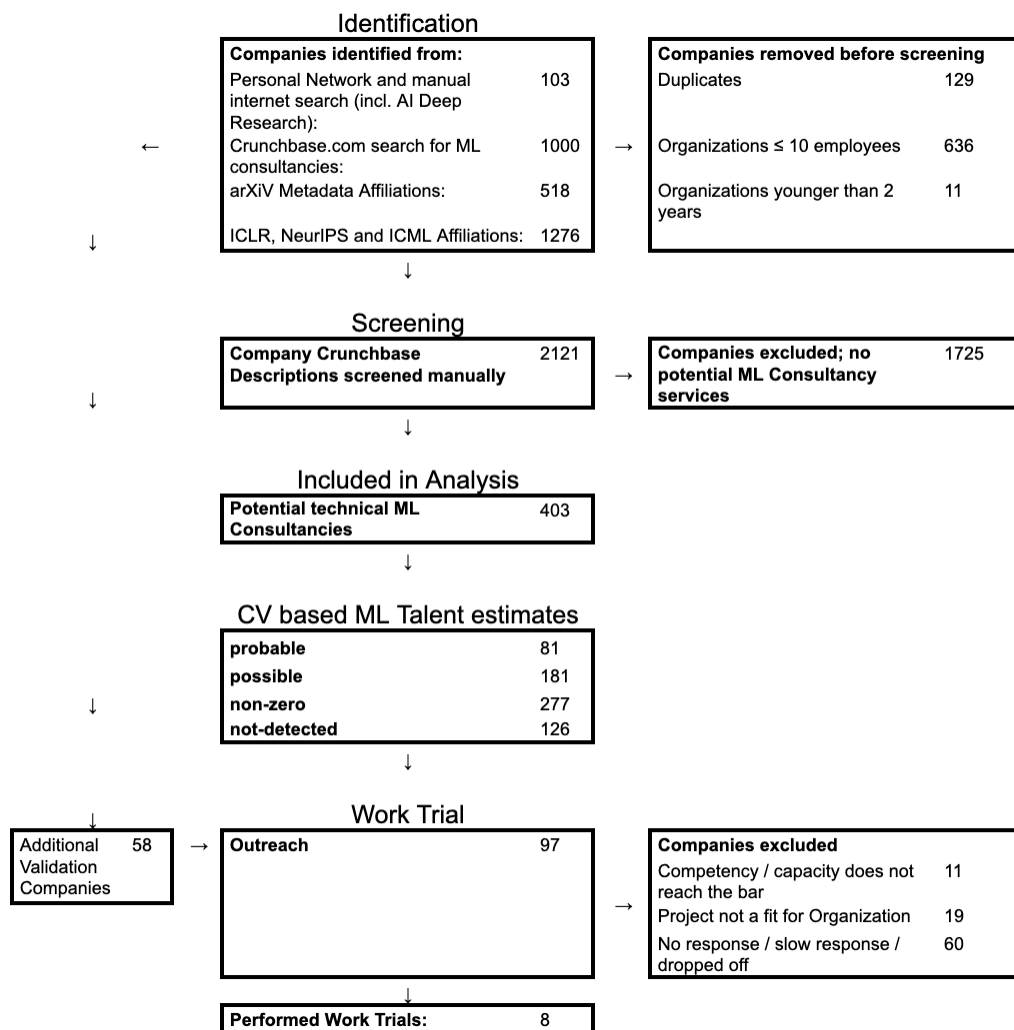


Figure S1. Extended flow chart of the systematic search and estimation pipeline

### Search strategies

1. Team's contacts and its networks recommendations
2. LLM deep research based
3. Unstructured Web Search with two independent RAs
4. Research & publication venues: arXiv Metadata (see code repository for details)

5. Conferences & sponsor / exhibitor lists: ICLR, ICML and NeurIPS 2019 onwards (see code repository for details)
6. Crunchbase Pro + keyword filters

#### Crunchbase Pro Query Filters

**INDUSTRY:** Includes (Outsourcing, Consulting)

**FOUNDED DATE:** Before (01/01/2022)

**FULL DESCRIPTION:** Includes (artificial intelligence, machine learning, deep learning, ai, ml, LLM, large language model, reinforcement learning)

**DESCRIPTION:** Includes (artificial intelligence, machine learning, deep learning, ai, ml, LLM, large language model, reinforcement learning)

**OPERATING STATUS:** Does not include (Closed)

**FULL DESCRIPTION:** Does not include (SaaS, Cloud-based analytics, Cloud infrastructure, Biodegradability testing, Enterprise software, Data center, Data capture, Document management, Semiconductor, Venture studio, Credit bureau reporting, Data labeling, Training data curation, Business growth consulting, Blockchain, Geospatial database, Incubator, Acquiring target audiences, Pyrotechnic products, Proprietary, self-service, Quantum software, software framework, Business development and communications, Leadership development, Sales enablement, Graphic Design Studio, Cloud Provider, GenAI Platform, PaaS, IaaS, Low-code application, Exoplanet discovery, ARM industry, Credit risk, Commercialization, subsurface environments, Brand intelligence, Customer relationship, Content creation, Podcast, Quantitative finance, Mobile app, Conference, Video analytics, Servicetitan, Call center, ACMI, Electric fan, Investment advisory, Market intelligence, Low code, web mobile, real estate, web development, financial services, cyber security, digital marketing, robotic process automation, robotic process, ui ux, mobile application, mobile development, ar vr, ux design, ux ui, mobile application development, development mobile, virtual reality, ios android, search engine, mobile apps, ui design, ui ux design, neo technologies, maktoum neo technologies, ux ui design, web development mobile, ai blockchain, website development, web mobile development, web mobile application development, web mobile application, blockchain development, blockchain ai, phone calls, sales service, web application, web scraping, web services, telefonica open, intelligence blockchain, iot artificial, iot data, consulting web, content marketing, marketing services, marketing solutions, search engine optimization, retail commerce, marketing sales, web applications, web design, web app, supply chain, management consulting, internet things, design development, social media, strategic consulting, market research, iot, cloud, strategy consulting, sales marketing, data security, legal services, media scope, oil gas, law firms, injury illness, analytics big data, E-commerce, Subscription, Data labelling, Ai-powered platform, Virtual assistant, Global brands, Intellectual property solutions, Industrial engineering, Intellectual property solutions, Intellectual property, Geochemical, Lead conversion, Workforce management, Personal learning products, Design-led, Translation agency, Online robot lawyer, Business process architecture, Contact center, Salesforce, Ophthalmology, Cultural tourism, Emotion analytics, EEG, Jobs marketplace, MIPS services, Product storytelling, Smart Signals, Revenue-raising, Licensing, online learning, Moodle-based, staffing and recruitment, AI-powered growth partner, AI-powered language technology, AI engine, Wellbeing support, Ambient intelligence, Marketing Mix, Transaction flows, Human resources technology, Marketplace, asset health, Smart recruitment, CRO, Annotation services, Safety solution strategy, Asset of value, Innovation intelligence, Competitive intelligence, High quality courses)

We did not explicitly search through startup & accelerator programs, nor make any big public announcements in mailing lists or run ads. Other data streams we either did not explore or were not satisfied with for getting data on companies: GitHub, Kaggle teams leaderboard, Gartner Market Guide, Forrester Wave, PitchBook, CapitalIQ, CB Insights, G2, Clutch, GoodFirms. The search was only in the English language. We investigated government repositories, but it wasn't helpful as keywords like machine learning weren't available.

#### Specs for identification

Keyword extraction was carried out in Google Colab with KeyBERT, which ranks candidate 1- to 4-gram phrases by computing cosine similarity between their TF-IDF-weighted representations and sentence-level embeddings generated by the



Salesforce/SFR-Embedding-Mistral model from SentenceTransformers running on an NVIDIA A100 GPU via PyTorch.

### **Sensitivity / Specificity across models**

True / False Positives and Negatives, Sensitivity / Specificity and F1 value of various LinkedIn Search methods

|  | filter                                     | TP  | FP | FN  | TN  | sensitivity | specificity | F1    |
|--|--|-----|----|-----|-----|-------------|-------------|-------|
|  | strict_yes_strict_no                       | 36  | 5  | 117 | 427 | 0.235       | 0.988       | 0.371 |
|  | strict_yes_broad_no                        | 13  | 1  | 140 | 431 | 0.085       | 0.998       | 0.156 |
|  | broad_yes_broad_no                         | 18  | 2  | 135 | 430 | 0.118       | 0.995       | 0.208 |
|  | broad_yes_strict_no                        | 46  | 8  | 107 | 424 | 0.301       | 0.981       | 0.444 |
|  | strict_yes_only                            | 0   | 0  | 153 | 432 | 0.000       | 1.000       | NaN   |
|  | broad_yes_only                             | 0   | 0  | 153 | 432 | 0.000       | 1.000       | NaN   |
|  | strict_no_only                             | 63  | 45 | 90  | 387 | 0.412       | 0.896       | 0.483 |
|  | broad_no_only                              | 25  | 14 | 128 | 418 | 0.163       | 0.968       | 0.260 |
|  | prompt-1-claude-sonnet-4-20250514          | 90  | 11 | 63  | 421 | 0.588       | 0.975       | 0.709 |
|  | prompt-1-claude-sonnet-4-20250514-t-at-1.0 | 75  | 25 | 78  | 407 | 0.490       | 0.942       | 0.593 |
|  | prompt-1-claude-opus-4-1-20250805          | 75  | 24 | 78  | 408 | 0.490       | 0.944       | 0.595 |
|  | prompt-2-claude-sonnet-4-20250514          | 68  | 12 | 85  | 420 | 0.444       | 0.972       | 0.584 |
|  | prompt-2-claude-sonnet-4-20250514-t-at-1.0 | 73  | 16 | 80  | 416 | 0.477       | 0.963       | 0.603 |
|  | prompt-2-claude-opus-4-1-20250805          | 43  | 13 | 110 | 419 | 0.281       | 0.970       | 0.411 |
|  | prompt-1-gemini-2.5-flash-lite             | 102 | 36 | 51  | 396 | 0.667       | 0.917       | 0.701 |
|  | prompt-1-gemini-2.5-flash                  | 109 | 74 | 44  | 358 | 0.712       | 0.829       | 0.649 |
|  | prompt-1-gemini-2.5-flash t=1.0            | 106 | 56 | 47  | 376 | 0.693       | 0.870       | 0.673 |
|  | prompt-1-gemini-2.5-pro                    | 111 | 61 | 42  | 371 | 0.725       | 0.859       | 0.683 |
|  | prompt-2-gemini-2.5-flash-lite             | 26  | 28 | 127 | 404 | 0.170       | 0.935       | 0.251 |
|  | prompt-2-gemini-2.5-flash                  | 88  | 20 | 65  | 412 | 0.575       | 0.954       | 0.674 |
|  | prompt-2-gemini-2.5-flash t=1.0            | 12  | 13 | 141 | 419 | 0.078       | 0.970       | 0.135 |
|  | prompt-2-gemini-2.5-pro                    | 99  | 37 | 54  | 395 | 0.647       | 0.914       | 0.685 |
|  | prompt-1-gpt-5-nano-2025-08-07             | 68  | 38 | 85  | 394 | 0.444       | 0.912       | 0.525 |
|  | prompt-1-gpt-5-mini-2025-08-07             | 111 | 57 | 42  | 375 | 0.725       | 0.868       | 0.692 |
|  | prompt-1-gpt-5-mini-2025-08-07-v2          | 116 | 51 | 37  | 381 | 0.758       | 0.882       | 0.725 |
|  | prompt-1-gpt-5-2025-08-07                  | 71  | 27 | 82  | 405 | 0.464       | 0.938       | 0.566 |
|  | prompt-2-gpt-5-nano-2025-08-07             | 38  | 9  | 115 | 423 | 0.248       | 0.979       | 0.380 |
|  | prompt-2-gpt-5-mini-2025-08-07             | 75  | 15 | 78  | 417 | 0.490       | 0.965       | 0.617 |
|  | prompt-2-gpt-5-mini-2025-08-07-v2          | 11  | 12 | 142 | 420 | 0.072       | 0.972       | 0.125 |
|  | prompt-2-gpt-5-2025-08-07                  | 40  | 11 | 113 | 421 | 0.261       | 0.975       | 0.392 |

| Annotator         | Sensitivity | Specificity | Accuracy |
|-------------------|-------------|-------------|----------|
| correlated_probit | 0.791       | 0.926       | 0.891    |

## Validation Dataset

Available in code repository.

Profiles included the following companies:

Small-scale technical AI Alignment: Palisade Research, CHAI, FAR.AI, Apollo Research, Goodfire and Transluc. Large-scale technical AI Alignment: Google DeepMind, OpenAI, and Anthropic

IT Consultancies: Accenture, HCL Technologies, Ernst & Young (EY), Infosys, Wipro, PricewaterhouseCoopers (PwC), Cognizant, Tata Consultancy Services, Deloitte, Capgemini, Bain, BCG X

### Validation: AI and non-AI companies

As an additional validation step, we applied the selected estimation methods to companies we knew to have high technical ML Research Talent counts and to organizations who certainly don't. The results are presented in the Supplements. Note that some companies were not evaluated with LLMs due to their size and associated costs.

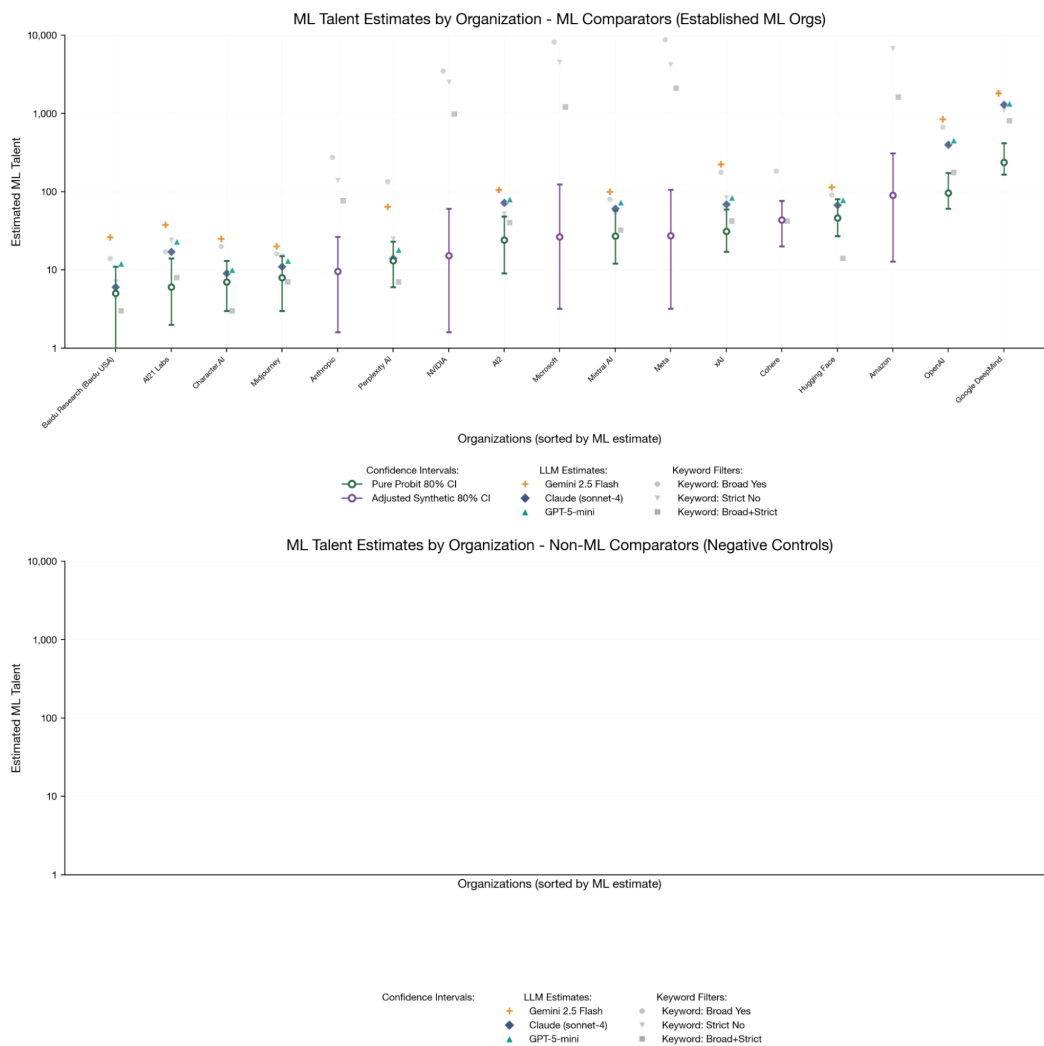


Figure S2. Validation: AI and non-AI company estimates

| Company Name               | Founded | Country | Total Staff (LinkedIn) | Individual Estimates [broad+strict, strict, broad, claude, gpt5, gemini] | ML Research Talent q50 (q10 – q90) | ML % of Total           | Category |
|----------------------------|---------|---------|------------------------|--|------------------------------------|-------------------------|----------|
| Google DeepMind            | 1970    | Unknown | 6 500                  | [801, 1100, 1900, 1285, 1330, 1803]                                      | 237 (166 - 414)                    | 3.65% (2.55% - 6.38%)   | Probable |
| OpenAI                     | 1970    | Unknown | 6 500                  | [175, 391, 671, 397, 454, 845]   | 96 (61 - 173)                      | 1.48% (0.94% - 2.66%)   | Probable |
| Amazon                     | 1970    | Unknown | 540 000                | [1600, 6700, 11000, -, -, -]   | 89 (12 - 308) *                    | 0.02% (0.00% - 0.06%)   | Probable |
| Hugging Face               | 1970    | Unknown | 603                    | [14, 48, 91, 67, 78, 114]  | 46 (27 - 80)                       | 7.63% (4.48% - 13.27%)  | Probable |
| Cohere                     | 1970    | Unknown | 810                    | [42, 73, 183, -, -, -]   | 43 (20 - 76) *                     | 5.33% (2.47% - 9.38%)   | Probable |
| xAI                        | 1970    | Unknown | 3 000                  | [42, 83, 177, 69, 84, 223]   | 31 (17 - 59)                       | 1.03% (0.57% - 1.97%)   | Probable |
| Mistral AI                 | 1970    | Unknown | 440                    | [32, 52, 80, 61, 73, 100]  | 27 (12 - 57)                       | 6.14% (2.73% - 12.95%)  | Probable |
| Meta                       | 1970    | Unknown | 70 000                 | [2100, 4200, 8800, -, -, -]  | 27 (3 - 105) *                     | 0.04% (0.00% - 0.15%)   | Probable |
| Microsoft                  | 1970    | Unknown | 22 000                 | [1200, 4500, 8200, -, -, -]  | 26 (3 - 123) *                     | 0.12% (0.01% - 0.56%)   | Probable |
| AI2                        | 1970    | Unknown | 313                    | [40, 52, 103, 72, 80, 106]   | 24 (9 - 48)                        | 7.67% (2.88% - 15.34%)  | Probable |
| NVIDIA                     | 1970    | Unknown | 43 000                 | [974, 2500, 3500, -, -, -]   | 15 (1 - 60) *                      | 0.04% (0.00% - 0.14%)   | Probable |
| Perplexity AI              | 1970    | Unknown | 1 000                  | [7, 25, 135, 14, 18, 64]   | 13 (6 - 23)                        | 1.30% (0.60% - 2.30%)   | Probable |
| Anthropic                  | 1970    | Unknown | 2 000                  | [76, 140, 276, -, -, -]  | 9 (1 - 26) *                       | 0.48% (0.08% - 1.32%)   | Probable |
| Midjourney                 | 1970    | Unknown | 171                    | [7, 15, 16, 11, 13, 20]  | 8 (3 - 15)                         | 4.68% (1.75% - 8.77%)   | Probable |
| Character.AI               | 1970    | Unknown | 207                    | [3, 9, 20, 9, 10, 25]  | 7 (3 - 13)                         | 3.38% (1.45% - 6.28%)   | Probable |
| AI21 Labs                  | 1970    | Unknown | 250                    | [8, 24, 17, 17, 23, 38]  | 6 (2 - 14)                         | 2.40% (0.80% - 5.60%)   | Probable |
| Baidu Research (Baidu USA) | 1970    | Unknown | 238                    | [3, 7, 14, 6, 12, 26]  | 5 (1 - 11)                         | 2.10% (0.42% - 4.62%)   | Probable |
| LawZero                    | 1970    | Unknown | 11                     | [1, 2, 4, 4, 5, 5]   | 2 (0 - 5)                          | 18.18% (0.00% - 45.45%) | Possible |

|  |      |         |     |                          |             |                             |                 |
|--|------|---------|-----|--------------------------|-------------|-----------------------------|-----------------|
| Thinking<br>Machines<br>Lab                                | 1970 | Unknown | 67  | [12, 15, 22, -, -, -]    | 0 (0 - 0) * | 0.00%<br>(0.00% -<br>0.00%) | Not<br>Detected |
| Mila-<br>Quebec<br>Artificial<br>Intelligence<br>Institute | 1970 | Unknown | 872 | [130, 163, 424, -, -, -] | 0 (0 - 0) * | 0.00%<br>(0.00% -<br>0.00%) | Not<br>Detected |

| Company Name              | Founded | Country | Total Staff (LinkedIn) | Individual Estimates [broad+strict, strict, broad, claude, gpt5, gemini] | ML Research Talent q50 (q10 – q90) | ML % of Total         | Category     |
|---------------------------|---------|---------|------------------------|--|------------------------------------|-----------------------|--------------|
| Burberry                  | 1970    | Unknown | 8 500                  | [0, 2, 5, 1, 1, 2]   | 1 (0 - 3)                          | 0.01% (0.00% - 0.04%) | Possible     |
| Sherwin-Williams          | 1970    | Unknown | 44 000                 | [2, 29, 28, 1, 2, 6]   | 1 (0 - 3)                          | 0.00% (0.00% - 0.01%) | Possible     |
| The Coca-Cola Company     | 1970    | Unknown | 60 000                 | [2, 31, 68, 3, 9, 30]  | 1 (0 - 5)                          | 0.00% (0.00% - 0.01%) | Possible     |
| The North Face            | 1970    | Unknown | 4 500                  | [0, 0, 2, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Desigual                  | 1970    | Unknown | 2 500                  | [0, 0, 0, 0, 0, 1]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Jotun                     | 1970    | Unknown | 6 000                  | [0, 1, 5, 0, 0, 2]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Sierra Nevada Brewing Co. | 1970    | Unknown | 769                    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Penguin Random House      | 1970    | Unknown | 8 000                  | [1, 9, 18, 2, 2, 7]  | 0 (0 - 2)                          | 0.00% (0.00% - 0.03%) | Non-zero     |
| HarperCollins Publishers  | 1970    | Unknown | 4 000                  | [0, 8, 7, 0, 0, 1]   | 0 (0 - 2)                          | 0.00% (0.00% - 0.05%) | Non-zero     |
| Patagonia                 | 1970    | Unknown | 3 500                  | [0, 1, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Crocs, Inc.               | 1970    | Unknown | 5 500                  | [0, 1, 3, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| The British Museum        | 1970    | Unknown | 1 000                  | [0, 1, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Museo Nacional del Prado  | 1970    | Unknown | 296                    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| London Symphony Orchestra | 1970    | Unknown | 232                    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| New York Philharmonic     | 1970    | Unknown | 288                    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| Hydro Flask               | 1970    | Unknown | 135                    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| YETI                      | 1970    | Unknown | 2 000                  | [0, 0, 5, 1, 0, 1]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |
| LVMH                      | 1970    | Unknown | 7 000                  | [0, 2, 17, 1, 5, 12]   | 0 (0 - 0)                          | 0.00% (0.00% - 0.00%) | Not Detected |

## Work Trial Repository and Evaluation Metric

<https://github.com/MxSchons-GmbH/consultancy-ml-research-talent-estimates>

### 1. Technical Correctness (Weight = 40 %)

| Score           | Description   |
|-----------------|---|
| 3 – Excellent   | All required artefacts present; metrics reported for Forget T, Validation V, Retain R before and after RTT; Recovery-Rate stated and $\leq 1.05$ (i.e. $\leq 105\%$ of original performance); code implements correct data splits and loss functions described in RTT (§4.3). |
| 2 – Minor flaws | Runs finish and metrics exist, but one of: (i) wrong split sizes, (ii) Recovery-Rate omitted, (iii) retain-drop exceeds stated 5 / 10 / 30 % boundary without explanation.  |
| 1 – Major flaws | Pipeline executes but results conflict with spec (e.g., forget accuracy increases after unlearning); or RTT fine-tunes the original not the unlearned model   |
| 0 – Invalid     | Script crashes, wrong target task, or any hand-edited prediction/metric file detected (MLE-Bench red-flag).   |

LLM actions: parse main.py AST for data-loader arguments; diff reported numbers against wandb\_run-\*.json; compute Recovery-Rate automatically.

### 2. Experimental Rigor & Reproducibility (25 %)

| Score | Description  |
|-------|--|
| 3     | Clear baseline run, $\geq 1$ hyper-parameter sweep for both baseline & method; fixed seeds (torch.manual_seed or Hydra seed=); compute budgets (epochs, GPU type) stated; W&B run IDs and Git commit SHA logged. |
| 2     | Baseline exists or seeds fixed, but hyper-sweep partial ( $< 3$ values) or compute not recorded.   |
| 1     | Only a single run; no baseline; ad-hoc HP search (“time constraints”).   |
| 0     | No experimental details or logs recoverable.   |

### 3. Code Quality & Maintainability (15 %)

LLM parses the lone entry-point plus config.

| Score | Description   |
|-------|---|
| 3     | PEP8-clean; functions/classes $> 70\%$ documented; typing used; cyclomatic complexity $< 15$ ; configs externalised (Hydra / YAML). |
| 2     | Modular but sparse docs or missing types; minor duplication; lint passes with $\leq 10$ warnings.                                   |
| 1     | Monolithic script, hard-coded paths/HPs, $> 30$ warnings, acknowledged need for refactor.   |
| 0     | Won’t import, mixed tabs/spaces, or contains credentials.   |

### 4. Communication & Insight (15 %)

| Score | Report Attributes  |
|-------|--|
| 3     | Executive summary, method diagram/figure, interprets failure modes, lists next-steps; cites RTT correctly; $\leq 10$ pages; professional tone. |

---

|   |   |
|---|---|
| 2 | Complete narrative but thin reflection (e.g., “time constraints” repeated).     |
| 1 | Mostly raw W&B screenshots; prose < 1 page; vague claims (“results look good”). |
| 0 | Missing or incomprehensible.  |

---



---

#### 5. Bonus Innovation / Extras (+0-10 ppt)

Award in 2-point increments for: ablation studies, alternative unlearning algorithms, automated sweep scripts, CI tests, dashboards, compute-matched comparisons, etc. (Cap bonus at +10 ppt so core metrics dominate.)

---

#### 6. Aggregation

Final % =  $0.40 \cdot A1 + 0.25 \cdot A2 + 0.15 \cdot A3 + 0.15 \cdot A4 + \text{Bonus}$

Recommendation: > 70%

Conditional Recommendation:  $\geq 50\%$

No Recommendation: < 50%

---

#### Specification of company profiles and talent

Applicants who passed a minimum bar of subject matter expertise (e.g. at least one strong ML engineer or past projects that demonstrated substantive research abilities) were invited to an interview. If applicants didn’t meet the bar they were offered the opportunity to provide different team members. Interviews served for further validation of subject matter expertise (“share the two to three most complex machine learning projects you worked on in the past 6-12 months”), internal scale (“How many employees do you have who could tackle tasks such as training GPT-2 from scratch”), research approach (“Would you want to drive the research internally or do you need external guidance”), and providing additional context for the IT consultancies.



---

**Ideal Company Profile**

Here are some ideal attributes of organizations we are looking for (but not necessarily dealbreakers if a vendor does not satisfy 1 of these criteria).

Our goal is to test if potential consultancies in industry can contribute meaningfully to research in AI safety. As such, we have focused on the following attributes:

1. Consultancies that have existed or operated actively with client work for more than 2 years as an indicator of organizational execution
2. Organizations that have upwards of 15 staff (long-term contracts or permanent staff), or at least have demonstrated ability to manage increasing staff overhead successfully over time
3. Organizations that have enough liquidity to complete the project, ideally demonstrating they have the necessary resources to complete the 2-month project and manage their financial risks
4. Consultancies that can demonstrate that their project portfolio has a good amount of diversity (or at least that the ML work is not only related to AI safety research)

Unfortunately, we have decided to not prioritize contractor network groups (where team members are usually on a project-basis and are not long-term or permanent staff members) as our aim is to test consultancies that have some longer-term cohesion.

Staff Roles Required

**Researcher (at least 1)**

Focuses on conceptual understanding, creative problem-solving, and theoretical knowledge.

Responsibilities

- Attempt to understand the research problem deeply.
- Explore and articulate ideas and the approaches for creating the DMUM.
- Create detailed method specifications for the DMUM.
- Provide reports on progress, challenges, solutions, and assumptions.
- Shows excitement about potentially publishing research findings.

Desired traits

- Expertise in relevant academic fields, potentially evidenced by papers written with company affiliation or authorship. PhD is ideal but not required.
- Experience with public outputs (e.g., blogs, GitHub repos). Some engagement with relevant online communities on the research problem ideal but not required
- Tenacity in tackling challenges and asking pertinent clarifying questions.
- Comfortable working with Large Language Models (LLMs).
- Adept at identifying and isolating root causes of unexpected research outcomes or model behaviors.

**ML Engineer (at least 1)**

Focuses on the practical implementation, code integration, and ensuring functional output.

Responsibilities

- Understand the existing codebase(s), modify or add method logic, and create necessary configurations
- Implement methods according to specifications (ensure robust loss calculation and handling of the model's internal mechanisms)
- Ensures code runs without crashing and produces expected results, even if preliminary
- Provide clear and timely progress reports (e.g., Loom/text reports) detailing activities, challenges, and solutions.

Desired Background/Traits:

- Comfortable building implementations directly from specifications
  - Comfortable with manipulating various data formats and handling their integration into the codebase
  - Comfortable with distributed runs and [RE-Bench](#) type stuff
  - Skills evidenced by public outputs like GitHub repositories
  - Ability to communicate technical progress effectively
-

## Complete Company Evaluation

**Table S9.** Complete Company Evaluation: ML Research Talent estimates for all 403 identified organizations

| Company                          | Year | Country        | Staff   | Individual Estimates          | ML q50 (CI)     | ML %                        | Category |
|----------------------------------|------|----------------|---------|-------------------------------|-----------------|-----------------------------|----------|
| <b>Tata Consultancy Services</b> | 1968 | India          | 640 000 | [305, 5400, 3200, 0, 0, 0]    | 87 (12 - 322) * | 0.01%<br>(0.00% - 0.05%)    | Probable |
| <b>Accenture</b>                 | 1989 | Ireland        | 550 000 | [186, 3400, 3500, 0, 0, 0]    | 76 (13 - 280) * | 0.01%<br>(0.00% - 0.05%)    | Probable |
| <b>Yandex</b>                    | 1997 | Russia         | 9 900   | [67, 521, 232, 142, 291, 528] | 60 (41 - 90)    | 0.61%<br>(0.41% - 0.91%)    | Probable |
| <b>Deloitte</b>                  | 1845 | United Kingdom | 430 000 | [171, 2200, 3700, 0, 0, 0]    | 54 (8 - 211) *  | 0.01%<br>(0.00% - 0.05%)    | Probable |
| <b>Cohere</b>                    | 2019 | Canada         | 831     | [45, 75, 187, 85, 112, 136]   | 45 (26 - 76)    | 5.42%<br>(3.13% - 9.15%)    | Probable |
| <b>Scale AI</b>                  | 2016 | United States  | 5 800   | [68, 221, 594, 82, 179, 326]  | 45 (29 - 75)    | 0.78%<br>(0.50% - 1.29%)    | Probable |
| <b>IBM</b>                       | 1911 | United States  | 290 000 | [443, 2300, 3900, -, -, -]    | 42 (5 - 143) *  | 0.01%<br>(0.00% - 0.05%)    | Probable |
| <b>Capgemini</b>                 | 1967 | France         | 260 000 | [103, 2100, 1500, -, -, -]    | 38 (5 - 131) *  | 0.01%<br>(0.00% - 0.05%)    | Probable |
| <b>Cerebras Systems</b>          | 2016 | United States  | 726     | [22, 71, 142, 69, 76, 142]    | 36 (21 - 61)    | 4.96%<br>(2.89% - 8.40%)    | Probable |
| <b>Quantiphi</b>                 | 2013 | United States  | 3 800   | [23, 195, 279, 17, 92, 188]   | 30 (19 - 46)    | 0.80%<br>(0.50% - 1.21%)    | Probable |
| <b>Mistral AI</b>                | 2023 | France         | 442     | [31, 51, 76, 59, 62, 93]      | 27 (11 - 53)    | 6.11%<br>(2.49% - 11.99%)   | Probable |
| <b>Faculty</b>                   | 2014 | United Kingdom | 939     | [15, 39, 83, 7, 41, 48]       | 27 (15 - 45)    | 2.88%<br>(1.60% - 4.79%)    | Probable |
| <b>Preferred Networks</b>        | 2014 | Japan          | 303     | [24, 72, 49, 45, 72, 106]     | 22 (10 - 43)    | 7.26%<br>(3.30% - 14.19%)   | Probable |
| <b>Naver Cloud</b>               | 2009 | South Korea    | 1 300   | [18, 57, 44, 78, 107, 135]    | 20 (12 - 35)    | 1.54%<br>(0.92% - 2.69%)    | Probable |
| <b>Cognizant</b>                 | 1994 | United States  | 300 000 | [85, 1300, 1600, 0, 0, 0]     | 18 (2 - 65)     | 0.01%<br>(0.00% - 0.02%)    | Probable |
| <b>Booz Allen Hamilton</b>       | 1914 | United States  | 41 000  | [46, 202, 715, 25, 93, 281]   | 18 (9 - 34)     | 0.04%<br>(0.02% - 0.08%)    | Probable |
| <b>Liquid AI</b>                 | 2023 | United States  | 79      | [11, 20, 28, 21, 25, 24]      | 16 (9 - 25)     | 20.25%<br>(11.39% - 31.65%) | Probable |
| <b>LG CNS</b>                    | 1987 | South Korea    | 5 400   | [11, 63, 40, 13, 41, 98]      | 14 (6 - 27)     | 0.26%<br>(0.11% - 0.50%)    | Probable |
| <b>Omdena</b>                    | 2019 | United States  | 556     | [65, 46, 214, 2, 13, 32]      | 14 (7 - 26)     | 2.52%<br>(1.26% - 4.68%)    | Probable |
| <b>SambaNova Systems</b>         | 2017 | United States  | 474     | [11, 42, 68, 15, 21, 63]      | 13 (6 - 23)     | 2.74%<br>(1.27% - 4.85%)    | Probable |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |         |                            |               |                            |          |
|-------------------------------------|------|----------------|---------|----------------------------|---------------|----------------------------|----------|
| Company                             | Year | Country        | Staff   | Individual Estimates       | ML q50 (CI)   | ML %                       | Category |
| Upstage                             | 2020 | South Korea    | 187     | [7, 23, 16, 19, 27, 46]    | 13 (7 - 23)   | 6.95%<br>(3.74% - 12.30%)  | Probable |
| Data Science Group                  | 2015 | Israel         | 490     | [22, 49, 116, -, -, -]     | 13 (5 - 27) * | 2.78%<br>(1.14% - 5.55%)   | Probable |
| QuantCo                             | 2017 | United States  | 237     | [14, 30, 58, 23, 37, 58]   | 13 (7 - 22)   | 5.49%<br>(2.95% - 9.28%)   | Probable |
| BCG X                               | 1963 | United States  | 2 600   | [15, 69, 219, 12, 45, 103] | 12 (5 - 22)   | 0.46%<br>(0.19% - 0.85%)   | Probable |
| Silo.AI                             | 2017 | Finland        | 239     | [19, 44, 85, -, -, -]      | 11 (4 - 20) * | 4.69%<br>(2.01% - 8.70%)   | Probable |
| Encora                              | 2003 | United States  | 7 200   | [5, 57, 83, -, -, -]       | 11 (2 - 31) * | 0.16%<br>(0.03% - 0.43%)   | Probable |
| LightOn                             | 2016 | France         | 287     | [0, 5, 6, 5, 8, 13]        | 10 (3 - 22)   | 3.48%<br>(1.05% - 7.67%)   | Probable |
| Fusion                              | 2004 | United States  | 85 000  | [48, 178, 312, -, -, -]    | 10 (0 - 34) * | 0.01%<br>(0.00% - 0.04%)   | Probable |
| InFocusp                            | 2009 | India          | 228     | [8, 17, 38, 2, 17, 30]     | 10 (6 - 16)   | 4.39%<br>(2.63% - 7.02%)   | Probable |
| QuantumBlack                        | 2009 | United Kingdom | 523     | [10, 33, 107, 4, 27, 52]   | 10 (3 - 19)   | 1.91%<br>(0.57% - 3.63%)   | Probable |
| ML6                                 | 2013 | Belgium        | 130     | [0, 19, 14, 4, 17, 32]     | 10 (5 - 17)   | 7.69%<br>(3.85% - 13.08%)  | Probable |
| Layer 6 AI                          | 2016 | Canada         | 87      | [8, 21, 45, -, -, -]       | 9 (3 - 16) *  | 11.04%<br>(3.68% - 18.39%) | Probable |
| WA                                  | 2009 | Japan          | 87 000  | [5, 31, 97, -, -, -]       | 8 (0 - 34) *  | 0.01%<br>(0.00% - 0.04%)   | Probable |
| Tryolabs                            | 2010 | Uruguay        | 98      | [3, 21, 13, 5, 16, 24]     | 7 (2 - 14)    | 7.14%<br>(2.04% - 15.00%)  | Probable |
| Beyond Limits                       | 2014 | United States  | 295     | [1, 3, 18, 0, 9, 16]       | 7 (3 - 12)    | 2.37%<br>(1.02% - 4.07%)   | Probable |
| MEGVII                              | 2011 | China          | 428     | [7, 21, 12, 34, 65, 107]   | 7 (2 - 14) *  | 1.68%<br>(0.56% - 3.36%)   | Probable |
| Genpact                             | 1997 | United States  | 130 000 | [28, 384, 582, -, -, -]    | 7 (0 - 28)    | 0.01%<br>(0.00% - 0.02%)   | Possible |
| G-Research                          | 2001 | United Kingdom | 1 100   | [19, 43, 69, 16, 23, 49]   | 6 (3 - 11)    | 0.55%<br>(0.27% - 1.00%)   | Probable |
| Cambridge Consultants               | 1960 | United States  | 794     | [3, 14, 26, 3, 11, 27]     | 6 (2 - 13)    | 0.76%<br>(0.25% - 1.64%)   | Probable |
| Inflection AI                       | 2022 | United States  | 63      | [1, 6, 12, 9, 11, 14]      | 6 (2 - 12)    | 9.52%<br>(3.17% - 19.05%)  | Probable |
| ipe                                 | 2004 | France         | 9 400   | [0, 10, 10, 0, 0, 0]       | 6 (1 - 18)    | 0.06%<br>(0.01% - 0.19%)   | Probable |

*Continued on next page*

| <i>Continued from previous page</i> |      |                      |        |                            |              |                            |          |
|-------------------------------------|------|----------------------|--------|----------------------------|--------------|----------------------------|----------|
| Company                             | Year | Country              | Staff  | Individual Estimates       | ML q50 (CI)  | ML %                       | Category |
| Publicis Sapient                    | 1990 | United States        | 21 000 | [20, 151, 356, 2, 31, 150] | 6 (2 - 19)   | 0.03%<br>(0.01% - 0.09%)   | Probable |
| Abacus.AI                           | 2019 | United States        | 185    | [8, 25, 25, 3, 9, 22]      | 6 (2 - 10)   | 3.24%<br>(1.08% - 5.41%)   | Probable |
| Sutherland                          | 1986 | United States        | 58 000 | [9, 47, 90, -, -, -]       | 6 (0 - 22) * | 0.01%<br>(0.00% - 0.04%)   | Probable |
| Fujitsu                             | 1935 | Japan                | 62 000 | [21, 166, 161, -, -, -]    | 6 (0 - 24) * | 0.01%<br>(0.00% - 0.04%)   | Probable |
| Science Systems and Applications    | 1977 | United States        | 652    | [7, 10, 39, -, -, -]       | 6 (2 - 15) * | 0.98%<br>(0.37% - 2.33%)   | Probable |
| ESTsoft                             | 1993 | South Korea          | 388    | [0, 0, 0, 2, 8, 10]        | 5 (2 - 9)    | 1.29%<br>(0.52% - 2.32%)   | Probable |
| Visium                              | 2018 | Switzerland          | 75     | [0, 3, 13, 7, 7, 9]        | 5 (2 - 9)    | 6.67%<br>(2.67% - 12.00%)  | Probable |
| Euranova                            | 2008 | Belgium              | 159    | [2, 24, 13, -, -, -]       | 5 (1 - 12) * | 3.52%<br>(1.01% - 7.55%)   | Probable |
| Presight                            | 2020 | United Arab Emirates | 510    | [2, 10, 27, 3, 13, 25]     | 5 (2 - 11)   | 0.98%<br>(0.39% - 2.16%)   | Probable |
| Akvelon                             | 2000 | United States        | 688    | [0, 10, 13, 1, 2, 5]       | 5 (1 - 9)    | 0.73%<br>(0.15% - 1.31%)   | Probable |
| Modulai                             | 2018 | Sweden               | 27     | [5, 6, 14, 3, 10, 12]      | 5 (2 - 8)    | 18.52%<br>(7.41% - 29.63%) | Probable |
| Swisscom                            | 1998 | Switzerland          | 15 000 | [9, 70, 87, 6, 34, 66]     | 5 (2 - 9)    | 0.03%<br>(0.01% - 0.06%)   | Probable |
| Avanade                             | 2000 | United States        | 17 000 | [11, 174, 200, 2, 22, 106] | 4 (1 - 10)   | 0.02%<br>(0.01% - 0.06%)   | Probable |
| DareData                            | 2019 | Portugal             | 85     | [1, 8, 23, -, -, -]        | 4 (1 - 9) *  | 5.65%<br>(1.88% - 11.29%)  | Probable |
| LatticeFlow                         | 2020 | Switzerland          | 48     | [3, 12, 6, -, -, -]        | 4 (0 - 8) *  | 8.33%<br>(1.67% - 16.67%)  | Probable |
| NEC Corporation                     | 1899 | Japan                | 11 000 | [22, 74, 54, 24, 43, 102]  | 4 (1 - 9)    | 0.04%<br>(0.01% - 0.08%)   | Probable |
| Futurewei Technologies              | 2001 | United States        | 327    | [9, 11, 46, -, -, -]       | 4 (1 - 10) * | 1.47%<br>(0.49% - 3.18%)   | Probable |
| ActiveFence                         | 2018 | United States        | 334    | [2, 10, 9, 2, 3, 7]        | 4 (2 - 8)    | 1.20%<br>(0.60% - 2.40%)   | Probable |
| AE Studio                           | 2016 | United States        | 205    | [3, 4, 35, 7, 11, 17]      | 4 (1 - 8)    | 1.95%<br>(0.49% - 3.90%)   | Probable |
| NTT Research                        | 1998 | United States        | 85     | [7, 8, 12, 3, 7, 18]       | 4 (1 - 9)    | 4.71%<br>(1.18% - 10.59%)  | Probable |
| FPT Software                        | 1988 | United States        | 26 000 | [9, 199, 92, -, -, -]      | 4 (0 - 13) * | 0.02%<br>(0.00% - 0.05%)   | Possible |

*Continued on next page*

| <i>Continued from previous page</i> |      |               |        |                         |              |                            |          |
|-------------------------------------|------|---------------|--------|-------------------------|--------------|----------------------------|----------|
| Company                             | Year | Country       | Staff  | Individual Estimates    | ML q50 (CI)  | ML %                       | Category |
| Bespin Global                       | 2015 | South Korea   | 605    | [1, 4, 1, -, -, -]      | 4 (1 - 11) * | 0.79%<br>(0.26% - 1.85%)   | Probable |
| Adaptive ML                         | 2023 | France        | 31     | [6, 10, 8, 6, 8, 8]     | 4 (1 - 8)    | 12.90%<br>(3.23% - 25.81%) | Probable |
| Aurizn                              | 2022 | Australia     | 169    | [1, 5, 9, 1, 4, 9]      | 4 (2 - 8)    | 2.37%<br>(1.18% - 4.73%)   | Probable |
| Tooploox                            | 2012 | Poland        | 163    | [1, 19, 12, -, -, -]    | 4 (1 - 10) * | 2.94%<br>(0.98% - 6.38%)   | Probable |
| Unit8                               | 2017 | Switzerland   | 141    | [3, 15, 23, -, -, -]    | 4 (1 - 8) *  | 3.40%<br>(1.13% - 6.24%)   | Probable |
| deepsense.ai                        | 2014 | United States | 108    | [1, 19, 19, -, -, -]    | 4 (1 - 10) * | 4.44%<br>(1.48% - 9.63%)   | Probable |
| Moov AI                             | 2018 | Canada        | 57     | [0, 1, 5, 1, 2, 5]      | 3 (1 - 5)    | 5.26%<br>(1.75% - 8.77%)   | Probable |
| Elder Research                      | 1995 | United States | 170    | [0, 6, 23, -, -, -]     | 3 (0 - 6) *  | 1.88%<br>(0.47% - 3.76%)   | Probable |
| Halfspace                           | 2015 | United States | 81     | [0, 12, 12, 0, 6, 10]   | 3 (0 - 7)    | 3.70%<br>(0.00% - 8.64%)   | Possible |
| Supply Solutions                    | 2002 | Brazil        | 47 000 | [0, 0, 0, 0, 0, 0]      | 3 (0 - 10)   | 0.01%<br>(0.00% - 0.02%)   | Possible |
| MP DATA                             | 2015 | France        | 145    | [4, 33, 14, 0, 12, 18]  | 3 (0 - 6)    | 2.07%<br>(0.00% - 4.14%)   | Possible |
| Orcawise                            | 2011 | Ireland       | 65     | [0, 0, 10, 0, 3, 10]    | 3 (0 - 6)    | 4.62%<br>(0.00% - 9.23%)   | Possible |
| Merantix Momentum                   | 2019 | Germany       | 59     | [4, 6, 12, 1, 9, 12]    | 3 (1 - 7)    | 5.08%<br>(1.69% - 11.86%)  | Probable |
| IFG                                 | 2008 | United States | 4 800  | [0, 6, 13, 0, 0, 0]     | 3 (0 - 10)   | 0.06%<br>(0.00% - 0.21%)   | Possible |
| SAIT                                | 1997 | Italy         | 4 800  | [0, 3, 37, 0, 0, 0]     | 3 (0 - 10)   | 0.06%<br>(0.00% - 0.21%)   | Possible |
| Polestar Analytics                  | 2012 | India         | 647    | [2, 13, 13, 0, 1, 2]    | 3 (1 - 8)    | 0.46%<br>(0.15% - 1.24%)   | Probable |
| CAS                                 | 1988 | Germany       | 4 600  | [2, 9, 30, 0, 0, 0]     | 3 (0 - 9)    | 0.07%<br>(0.00% - 0.20%)   | Possible |
| DiveDeepAI                          | 2021 | Pakistan      | 43     | [0, 3, 10, 1, 5, 10]    | 3 (1 - 6)    | 6.98%<br>(2.33% - 13.95%)  | Probable |
| Effixis                             | 2017 | Switzerland   | 34     | [0, 1, 7, 0, 4, 8]      | 3 (1 - 6)    | 8.82%<br>(2.94% - 17.65%)  | Probable |
| BairesDev                           | 2009 | United States | 3 100  | [0, 20, 60, 2, 12, 28]  | 3 (0 - 8)    | 0.10%<br>(0.00% - 0.26%)   | Possible |
| VinAI Research                      | 2019 | Vietnam       | 33     | [1, 18, 13, 18, 31, 44] | 3 (1 - 7)    | 9.09%<br>(3.03% - 21.21%)  | Probable |

*Continued on next page*

| <i>Continued from previous page</i> |      |                      |       |                      |              |                            |          |
|-------------------------------------|------|----------------------|-------|----------------------|--------------|----------------------------|----------|
| Company                             | Year | Country              | Staff | Individual Estimates | ML q50 (CI)  | ML %                       | Category |
| Saxon AI                            | 2004 | United States        | 484   | [0, 8, 5, 0, 1, 3]   | 3 (1 - 8)    | 0.62%<br>(0.21% - 1.65%)   | Probable |
| twoday                              |      | Denmark              | 1 900 | [1, 24, 16, -, -, -] | 3 (0 - 10) * | 0.17%<br>(0.04% - 0.55%)   | Probable |
| Coexya                              | 2020 | France               | 648   | [1, 15, 3, 1, 3, 7]  | 3 (1 - 8)    | 0.46%<br>(0.15% - 1.23%)   | Probable |
| ML cube                             |      | Italy                | 25    | [3, 11, 11, 2, 3, 8] | 2 (0 - 4)    | 8.00%<br>(0.00% - 18.80%)  | Possible |
| Brainpool AI                        | 2016 | United Kingdom       | 24    | [0, 0, 3, 1, 2, 3]   | 2 (0 - 4)    | 8.33%<br>(0.00% - 16.67%)  | Possible |
| ThinkCol                            | 2016 | Hong Kong            | 22    | [0, 0, 0, 0, 2, 2]   | 2 (0 - 4)    | 9.09%<br>(0.00% - 18.18%)  | Possible |
| Xomnia                              | 2013 | Netherlands          | 91    | [1, 10, 11, 0, 4, 5] | 2 (0 - 5)    | 2.20%<br>(0.00% - 5.49%)   | Possible |
| Cogent Labs                         | 2014 | Japan                | 90    | [0, 1, 4, 0, 0, 1]   | 2 (0 - 5)    | 2.22%<br>(0.00% - 5.56%)   | Possible |
| Boltzbit                            | 2020 | United Kingdom       | 11    | [1, 2, 4, 1, 1, 1]   | 2 (0 - 3)    | 18.18%<br>(0.00% - 27.27%) | Possible |
| Fiddler AI                          | 2018 | United States        | 102   | [2, 5, 13, 1, 1, 5]  | 2 (0 - 4)    | 1.96%<br>(0.00% - 3.92%)   | Possible |
| Imandra                             | 2014 | United States        | 22    | [2, 0, 5, 3, 3, 9]   | 2 (0 - 5)    | 9.09%<br>(0.00% - 22.73%)  | Possible |
| DeepNeuronic                        | 2020 | Portugal             | 16    | [3, 7, 3, 1, 3, 4]   | 2 (1 - 5)    | 12.50%<br>(6.25% - 31.25%) | Probable |
| Info Strategic                      | 2016 | United Arab Emirates | 56    | [0, 1, 4, 0, 1, 2]   | 2 (0 - 4)    | 3.57%<br>(0.00% - 7.14%)   | Possible |
| InferLink                           | 2010 | United States        | 21    | [0, 2, 6, 2, 4, 6]   | 2 (0 - 4)    | 9.52%<br>(0.00% - 19.05%)  | Possible |
| Numlabs                             | 2019 | Poland               | 32    | [0, 6, 2, 1, 4, 5]   | 2 (0 - 5)    | 6.25%<br>(0.00% - 15.62%)  | Possible |
| Infinia ML                          | 2017 | United States        | 33    | [0, 6, 11, -, -, -]  | 2 (0 - 5) *  | 7.27%<br>(2.42% - 16.97%)  | Probable |
| Creatica                            | 2014 | Germany              | 84    | [0, 0, 0, 0, 0, 1]   | 2 (0 - 5)    | 2.38%<br>(0.00% - 5.95%)   | Possible |
| StatSoft                            | 1986 | Germany              | 33    | [1, 7, 1, -, -, -]   | 2 (0 - 4) *  | 7.27%<br>(2.42% - 14.55%)  | Probable |
| AMAI                                | 2018 | Germany              | 19    | [0, 3, 4, 2, 3, 6]   | 2 (0 - 4)    | 10.53%<br>(0.00% - 21.05%) | Possible |
| Enthought                           | 2001 | United States        | 72    | [5, 6, 17, 1, 4, 11] | 2 (0 - 5)    | 2.78%<br>(0.00% - 6.94%)   | Possible |
| R&D Center WINSTARS.AI              | 2016 | Ukraine              | 43    | [2, 6, 1, -, -, -]   | 2 (0 - 4) *  | 5.58%<br>(1.86% - 11.16%)  | Probable |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |        |                       |             |                            |          |
|-------------------------------------|------|----------------|--------|-----------------------|-------------|----------------------------|----------|
| Company                             | Year | Country        | Staff  | Individual Estimates  | ML q50 (CI) | ML %                       | Category |
| NNAISENSE                           | 2014 | Switzerland    | 16     | [2, 4, 3, 4, 5, 5]    | 2 (0 - 5)   | 12.50%<br>(0.00% - 31.25%) | Possible |
| EnliteAI                            | 2017 | Austria        | 17     | [0, 1, 2, 1, 1, 1]    | 2 (0 - 4)   | 11.76%<br>(0.00% - 23.53%) | Possible |
| Recursive                           | 2020 | Japan          | 52     | [1, 3, 7, 3, 4, 5]    | 2 (0 - 5)   | 3.85%<br>(0.00% - 9.62%)   | Possible |
| HI Iberia                           | 1989 | Spain          | 118    | [2, 9, 4, 0, 7, 10]   | 2 (0 - 4)   | 1.69%<br>(0.00% - 3.39%)   | Possible |
| Addepto                             | 2018 | Poland         | 68     | [1, 7, 10, 0, 2, 2]   | 2 (0 - 4)   | 2.94%<br>(0.00% - 5.88%)   | Possible |
| XITASO                              | 2011 | Germany        | 198    | [2, 12, 5, 2, 5, 10]  | 2 (0 - 5)   | 1.01%<br>(0.00% - 2.53%)   | Possible |
| Kyanon Digital                      | 2012 | Vietnam        | 294    | [1, 5, 2, 0, 1, 4]    | 2 (0 - 5)   | 0.68%<br>(0.00% - 1.70%)   | Possible |
| AND Technology Research             | 1980 | United Kingdom | 38 000 | [0, 0, 0, 0, 0, 0]    | 2 (0 - 9)   | 0.01%<br>(0.00% - 0.02%)   | Possible |
| RedMane Technology LLC              | 2000 | United States  | 351    | [0, 5, 6, 0, 1, 1]    | 2 (0 - 5)   | 0.57%<br>(0.00% - 1.42%)   | Possible |
| Closer Consulting                   | 2006 | Portugal       | 361    | [2, 8, 14, 0, 1, 7]   | 2 (0 - 5)   | 0.55%<br>(0.00% - 1.39%)   | Possible |
| VRIZE                               | 2020 | United States  | 373    | [1, 4, 2, 0, 0, 1]    | 2 (0 - 5)   | 0.54%<br>(0.00% - 1.34%)   | Possible |
| Charter Global                      | 1994 | United States  | 395    | [0, 0, 3, -, -, -]    | 2 (0 - 6) * | 0.61%<br>(0.20% - 1.76%)   | Probable |
| Technology Control Corporation      | 2008 | Saudi Arabia   | 418    | [0, 1, 5, 1, 2, 6]    | 2 (0 - 6)   | 0.48%<br>(0.00% - 1.44%)   | Possible |
| LeewayHertz Technologies            | 2007 | United States  | 211    | [0, 5, 9, 0, 0, 7]    | 2 (0 - 5)   | 0.95%<br>(0.00% - 2.37%)   | Possible |
| Stratpoint Technologies             | 1998 | Philippines    | 522    | [1, 6, 5, 0, 1, 4]    | 2 (0 - 6)   | 0.38%<br>(0.00% - 1.15%)   | Possible |
| Coherent Solutions                  | 1995 | United States  | 1 100  | [1, 7, 6, 0, 2, 4]    | 2 (0 - 5)   | 0.18%<br>(0.00% - 0.45%)   | Possible |
| Mobcoder                            | 2014 | United States  | 219    | [0, 4, 3, -, -, -]    | 2 (0 - 5) * | 1.10%<br>(0.00% - 2.56%)   | Possible |
| Spatialedge                         | 2016 | South Africa   | 134    | [6, 21, 23, 0, 0, 15] | 2 (0 - 5)   | 1.49%<br>(0.00% - 3.73%)   | Possible |
| Q agency                            | 2013 | Croatia        | 261    | [0, 0, 2, 0, 1, 2]    | 2 (0 - 5)   | 0.77%<br>(0.00% - 1.92%)   | Possible |
| Itransition                         | 1998 | United States  | 1 500  | [0, 7, 6, -, -, -]    | 2 (0 - 6) * | 0.16%<br>(0.00% - 0.43%)   | Possible |
| Kainos                              | 1986 | United Kingdom | 2 900  | [0, 16, 26, 0, 3, 5]  | 2 (0 - 6)   | 0.07%<br>(0.00% - 0.21%)   | Possible |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |       |                      |             |                           |          |
|-------------------------------------|------|----------------|-------|----------------------|-------------|---------------------------|----------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                      | Category |
| NeuroSYS                            | 2010 | Poland         | 52    | [1, 2, 0, 2, 2, 1]   | 1 (0 - 3)   | 1.92%<br>(0.00% - 5.77%)  | Possible |
| ANDRO Computational Solutions       | 1994 | United States  | 41    | [0, 3, 4, 1, 2, 4]   | 1 (0 - 3)   | 2.44%<br>(0.00% - 7.32%)  | Possible |
| BigThinkCode Technologies           | 2021 | India          | 51    | [1, 1, 2, 0, 0, 1]   | 1 (0 - 3)   | 1.96%<br>(0.00% - 5.88%)  | Possible |
| KAMTECH                             | 1997 | India          | 296   | [0, 0, 2, 0, 0, 0]   | 1 (0 - 3)   | 0.34%<br>(0.00% - 1.01%)  | Possible |
| Fraktal Norge                       | 2014 | Norway         | 52    | [0, 0, 1, 0, 1, 1]   | 1 (0 - 2)   | 1.92%<br>(0.00% - 3.85%)  | Possible |
| Software Systems                    | 1991 | Oman           | 264   | [0, 0, 0, 0, 0, 0]   | 1 (0 - 3)   | 0.38%<br>(0.00% - 1.14%)  | Possible |
| Cloud Temple                        | 2017 | France         | 302   | [1, 5, 1, 0, 1, 2]   | 1 (0 - 4)   | 0.33%<br>(0.00% - 1.32%)  | Possible |
| TechAhead                           | 2009 | United States  | 310   | [0, 2, 6, 0, 0, 1]   | 1 (0 - 4)   | 0.32%<br>(0.00% - 1.29%)  | Possible |
| Markovate Inc.                      | 2015 | United States  | 57    | [0, 0, 5, 0, 0, 1]   | 1 (0 - 3)   | 1.75%<br>(0.00% - 5.26%)  | Possible |
| Konverge.AI                         | 2018 | India          | 130   | [1, 6, 15, 0, 0, 8]  | 1 (0 - 4)   | 0.77%<br>(0.00% - 3.08%)  | Possible |
| Orobix                              | 2009 | Italy          | 38    | [1, 0, 3, 1, 2, 4]   | 1 (0 - 3)   | 2.63%<br>(0.00% - 7.89%)  | Possible |
| Edvantis                            | 2005 | Germany        | 343   | [0, 2, 1, 0, 0, 1]   | 1 (0 - 4)   | 0.29%<br>(0.00% - 1.17%)  | Possible |
| InData Labs                         | 2014 | Cyprus         | 59    | [0, 5, 4, 0, 4, 5]   | 1 (0 - 4)   | 1.69%<br>(0.00% - 6.78%)  | Possible |
| Applied Data Science Partners       | 2016 | United Kingdom | 33    | [0, 3, 4, 0, 1, 1]   | 1 (0 - 3)   | 3.03%<br>(0.00% - 9.09%)  | Possible |
| Tech Valley                         | 2014 | France         | 2 300 | [0, 0, 0, 0, 0, 0]   | 1 (0 - 5)   | 0.04%<br>(0.00% - 0.22%)  | Possible |
| Atmo                                | 2020 | United States  | 30    | [0, 6, 7, 1, 1, 1]   | 1 (0 - 3)   | 3.33%<br>(0.00% - 10.00%) | Possible |
| MI-6                                | 2017 | Japan          | 130   | [6, 19, 0, 0, 0, 6]  | 1 (0 - 4)   | 0.77%<br>(0.00% - 3.08%)  | Possible |
| DataRoot Labs                       | 2016 | Ukraine        | 28    | [1, 9, 1, 0, 3, 5]   | 1 (0 - 4)   | 3.57%<br>(0.00% - 14.29%) | Possible |
| Infer Solutions                     | 2002 | United States  | 20    | [0, 1, 0, 0, 0, 1]   | 1 (0 - 2)   | 5.00%<br>(0.00% - 10.00%) | Possible |
| LBox Co                             | 2019 | South Korea    | 25    | [0, 0, 0, 2, 3, 3]   | 1 (0 - 2)   | 4.00%<br>(0.00% - 8.00%)  | Possible |
| UMD                                 | 1983 | Australia      | 1 300 | [3, 6, 11, 0, 0, 0]  | 1 (0 - 3)   | 0.08%<br>(0.00% - 0.23%)  | Possible |

*Continued on next page*



| <i>Continued from previous page</i> |      |               |       |                      |             |                            |          |
|-------------------------------------|------|---------------|-------|----------------------|-------------|----------------------------|----------|
| Company                             | Year | Country       | Staff | Individual Estimates | ML q50 (CI) | ML %                       | Category |
| Neural Magic                        | 2018 | United States | 21    | [2, 3, 5, 1, 1, 1]   | 1 (0 - 2)   | 4.76%<br>(0.00% - 9.52%)   | Possible |
| BigData Republic                    | 2015 | Netherlands   | 23    | [0, 4, 4, 0, 2, 4]   | 1 (0 - 3)   | 4.35%<br>(0.00% - 13.04%)  | Possible |
| ELEKS                               | 1991 | Ukraine       | 1 900 | [1, 12, 5, 0, 0, 3]  | 1 (0 - 4)   | 0.05%<br>(0.00% - 0.21%)   | Possible |
| Pyramid Consulting Group            | 1996 | United States | 226   | [0, 0, 0, 0, 0, 0]   | 1 (0 - 3)   | 0.44%<br>(0.00% - 1.33%)   | Possible |
| GalaxE.Solutions                    | 1990 | United States | 1 300 | [0, 9, 4, 0, 0, 0]   | 1 (0 - 3)   | 0.08%<br>(0.00% - 0.23%)   | Possible |
| Binariks                            | 2014 | United States | 203   | [0, 3, 0, 0, 0, 0]   | 1 (0 - 2)   | 0.49%<br>(0.00% - 0.99%)   | Possible |
| kineo.ai                            | 2020 | Germany       | 12    | [0, 1, 2, 0, 1, 1]   | 1 (0 - 4)   | 8.33%<br>(0.00% - 33.33%)  | Possible |
| Strong Analytics                    | 2016 | United States | 9     | [1, 1, 3, 1, 2, 1]   | 1 (0 - 3)   | 11.11%<br>(0.00% - 33.33%) | Possible |
| Schafer Corporation                 | 1972 | United States | 176   | [0, 0, 0, 0, 0, 2]   | 1 (0 - 2)   | 0.57%<br>(0.00% - 1.14%)   | Possible |
| Altrium                             | 2022 | United States | 91    | [0, 2, 6, 0, 0, 4]   | 1 (0 - 3)   | 1.10%<br>(0.00% - 3.30%)   | Possible |
| AI Consult                          | 2019 | Brazil        | 203   | [0, 1, 0, 0, 0, 0]   | 1 (0 - 2)   | 0.49%<br>(0.00% - 0.99%)   | Possible |
| Qvik                                | 2008 | Finland       | 92    | [0, 1, 3, 0, 0, 1]   | 1 (0 - 2)   | 1.09%<br>(0.00% - 2.17%)   | Possible |
| Guardians Infotech                  | 2022 | United States | 81    | [0, 0, 0, 0, 0, 0]   | 1 (0 - 2)   | 1.23%<br>(0.00% - 2.47%)   | Possible |
| Xaion Data                          | 2020 | Japan         | 80    | [0, 0, 0, 0, 0, 0]   | 1 (0 - 2)   | 1.25%<br>(0.00% - 2.50%)   | Possible |
| Closetoop Technologies              | 2011 | United States | 95    | [0, 0, 3, 0, 0, 1]   | 1 (0 - 3)   | 1.05%<br>(0.00% - 3.16%)   | Possible |
| XenonStack                          | 2016 | United States | 96    | [0, 2, 3, 0, 0, 2]   | 1 (0 - 3)   | 1.04%<br>(0.00% - 3.12%)   | Possible |
| Avertra                             | 2007 | United States | 207   | [0, 1, 0, 0, 0, 1]   | 1 (0 - 3)   | 0.48%<br>(0.00% - 1.45%)   | Possible |
| 247 Labs                            | 2013 | Canada        | 76    | [0, 1, 1, -, -, -]   | 1 (0 - 4) * | 2.11%<br>(0.00% - 5.26%)   | Possible |
| Megamax Services                    | 2015 | India         | 210   | [0, 2, 0, 0, 0, 0]   | 1 (0 - 3)   | 0.48%<br>(0.00% - 1.43%)   | Possible |
| Sahana System                       | 2012 | India         | 158   | [1, 7, 4, 0, 0, 3]   | 1 (0 - 4)   | 0.63%<br>(0.00% - 2.53%)   | Possible |
| Sieger                              | 2004 | Germany       | 220   | [0, 1, 1, -, -, -]   | 1 (0 - 4) * | 0.73%<br>(0.00% - 1.82%)   | Possible |

*Continued on next page*

| <i>Continued from previous page</i>     |      |                |       |                      |             |                           |              |
|---|------|----------------|-------|----------------------|-------------|---------------------------|--------------|
| Company                                 | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                      | Category     |
| FS Studio                               | 2013 | United States  | 64    | [0, 0, 0, 0, 0, 2]   | 1 (0 - 3)   | 1.56%<br>(0.00% - 4.69%)  | Possible     |
| DeepMetis                               | 2020 | Germany        | 13    | [0, 0, 0, 0, 1, 2]   | 1 (0 - 4)   | 7.69%<br>(0.00% - 30.77%) | Possible     |
| HydroMind                               | 2021 | India          | 4     | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 25.00%) | Non-zero     |
| Finolity Consultancy Services           | 2017 | India          | 4     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| iiNumbers                               | 2014 | Taiwan         | 4     | [0, 1, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Double Check Consulting                 | 2011 | United States  | 10    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Technology                              | 2001 | Lebanon        | 3     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Q-Noon                                  | 2017 | Turkey         | 3     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Chi SquareX                             | 2021 | India          | 10    | [1, 3, 4, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 10.00%) | Non-zero     |
| HatchWorks                              | 2016 | United States  | 0     | [0, 2, 4, -, -, -]   | 0 (0 - 0) * | -                         | Not Detected |
| we-do.ai                                | 2007 | Germany        | 9     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| YouNeedD                                | 2014 | Colombia       | 4     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| HyQuest Consulting Solutions            | 2007 | United States  | 9     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Xaigi Technology                        | 2021 | India          | 3     | [0, 0, 6, 0, 1, 2]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Polixir                                 | 2018 | China          | 10    | [0, 1, 1, -, -, -]   | 0 (0 - 1) * | 0.00%<br>(0.00% - 16.00%) | Non-zero     |
| Kmeleon                                 | 2017 | United States  | 10    | [0, 1, 2, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Solid Software Solutions                | 2011 | Poland         | 3     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| FlowPlus                                | 2018 | United Kingdom | 3     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| AIQRATE                                 | 2019 | India          | 3     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Royal Caliber                           | 2011 | United States  | 10    | [0, 0, 1, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 8.00%)  | Non-zero     |
| The Quantitative Consulting & Solutions | 2013 | Hong Kong      | 3     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)  | Not Detected |

*Continued on next page*

| <i>Continued from previous page</i>    |      |                |       |                      |             |                          |              |
|--|------|----------------|-------|----------------------|-------------|--------------------------|--------------|
| Company                                | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                     | Category     |
| Downtown Consulting                    | 2011 | United Kingdom | 3     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Japan Data Science Consortium          | 2018 | Japan          | 3     | [0, 0, 0, 0, 0, 4]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| RBC Group                              | 2008 | Ukraine        | 9     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| IT Consulting Group                    | 2011 | United States  | 3     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| □ □ □ □ □ □ □                          | 2021 | Taiwan         | 7     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Taris Technologies                     | 2022 | India          | 4     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Azati Corporation                      | 2002 | Poland         | 4     | [0, 1, 0, 0, 0, 2]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Digiwise                               | 2012 | Iran           | 7     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Gefatec                                | 2012 | Brazil         | 7     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| NEC Research Institute                 |      | Unknown        | 7     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Eigen partners                         |      | United States  | 7     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Qexpert                                | 2015 | Brazil         | 6     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Lukasa                                 | 2021 | United States  | 8     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Ignous                                 | 2012 | Chile          | 8     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Vertex Laboratories                    | 2016 | United States  | 6     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Thinking Machines                      | 2015 | Philippines    | 8     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Evergo                                 | 2006 | Poland         | 3     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Springbok AI                           | 2017 | United Kingdom | 6     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Courart Informática                    | 1991 | Brazil         | 8     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Information Workers Group              | 2006 | Italy          | 6     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Toncent Information Technology Service | 2015 | China          | 6     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |

*Continued on next page*

| <i>Continued from previous page</i> |      |                      |       |                      |             |                            |              |
|-------------------------------------|------|----------------------|-------|----------------------|-------------|----------------------------|--------------|
| Company                             | Year | Country              | Staff | Individual Estimates | ML q50 (CI) | ML %                       | Category     |
| Data-Sleek                          | 2020 | United States        | 8     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| USC                                 | 1991 | Japan                | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| New Outcome                         | 2001 | Germany              | 5     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Accord Business Group               | 2014 | United Arab Emirates | 5     | [0, 0, 7, 0, 1, 2]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| GENIA                               | 2019 | Trinidad and Tobago  | 5     | [0, 2, 0, -, -, -]   | 0 (0 - 1) * | 16.00%<br>(0.00% - 32.00%) | Possible     |
| PBQ Oilfield Services               | 2013 | United Arab Emirates | 5     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Muons Technology                    |      | United States        | 8     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Arena Technologies                  | 2002 | United States        | 5     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Tumult Labs                         | 2019 | United States        | 5     | [0, 0, 0, 0, 0, 2]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 20.00%)  | Non-zero     |
| Allogic Tecnologia                  | 2016 | Brazil               | 5     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| H&W Consulting                      | 2017 | China                | 7     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| ONE LOGIC                           | 2013 | Germany              | 6     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Inftech                             |      | Germany              | 2     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Sevn3.ai                            | 2021 | India                | 2     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Inttao                              | 2003 | United States        | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                          | Not Detected |
| Chapel Hill Tech                    | 2002 | United States        | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)   | Not Detected |
| Rubentis                            | 2015 | South Korea          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| Technologies                        | 2014 | Japan                | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| ROA Intelligence                    | 2003 | South Korea          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| Geeks Data Consulting               | 2016 | Tunisia              | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                          | Not Detected |
| curious.ai                          | 2013 | Unknown              | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| Xihu Xinchun                        | 2021 | China                | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| BitAddict AB                        | 2014 | Sweden               | 0     | [0, 0, 0, 0, 0, 1]   | 0 (0 - 0) * | -                          | Not Detected |
| ANewD.ai                            | 2017 | United States        | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                          | Not Detected |
| Inavan India Technologies           | 2003 | India                | 0     | [1, 2, 3, 1, 1, 2]   | 0 (0 - 0) * | -                          | Not Detected |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |       |                      |             |                          |              |
|-------------------------------------|------|----------------|-------|----------------------|-------------|--------------------------|--------------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                     | Category     |
| NivoNexus                           | 2021 | Unknown        | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| RedMaxx Consultoria                 | 2008 | Brazil         | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not Detected |
| ClearSource                         | 2008 | United States  | 11    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| NeXT'S                              | 2014 | Burkina Faso   | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not Detected |
| NUMERICUBE                          | 2009 | France         | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Automators GmbH                     | 2018 | Austria        | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not Detected |
| Defour Analytics Pvt. Ltd.          | 2016 | India          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Visual IT Solutions                 | 2008 | India          | 0     | [0, 0, 1, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not Detected |
| RK Software Services                | 2010 | United States  | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not Detected |
| Argonaut AI                         | 2021 | El Salvador    | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Woyitech.com                        | 2005 | China          | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not Detected |
| Innovacio Technologies              | 2019 | India          | 0     | [0, 1, 1, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Machine Learning Solutions          | 2018 | Italy          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Boostalogo                          | 2015 | United States  | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| AROUSAL Tech.                       | 2013 | Japan          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Spectra Analytics                   | 2014 | United Kingdom | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| AritaWeb Inc.                       | 2015 | United States  | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Globe Geosolution                   | 2014 | India          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                        | Not Detected |
| Lipon Technologies                  | 2021 | India          | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Alexander Thamm                     | 2012 | Germany        | 1     | [0, 0, 1, 2, 7, 17]  | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| AI Research                         | 2018 | United States  | 2     | [0, 0, 1, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| LinkUp Studio                       | 2013 | Ukraine        | 2     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Amplient Labs                       | 2016 | United States  | 2     | [0, 0, 1, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Webpragma                           | 2004 | United States  | 2     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Element AI                          | 2016 | Canada         | 2     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| EXCEEDDATA                          | 2015 | China          | 2     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |       |                      |             |                          |                 |
|-------------------------------------|------|----------------|-------|----------------------|-------------|--------------------------|-----------------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                     | Category        |
| Resileo                             | 2014 | India          | 2     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Makes.ai                            | 2020 | Brazil         | 2     | [0, 0, 0, 0, 1, 2]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Data Cowboys                        | 2014 | United States  | 2     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Exometrics                          | 2016 | United Kingdom | 2     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Kantic Analytics                    | 2020 | France         | 2     | [0, 1, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| aiso-lab                            | 2017 | Unknown        | 2     | [0, 0, 1, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Biz Digital Connection              | 2014 | Colombia       | 0     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0) * | -                        | Not<br>Detected |
| Pathway Intelligence                | 2005 | Unknown        | 2     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Albitech Consulting                 | 2008 | Finland        | 2     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Stowe Research International        | 1998 | United States  | 2     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Intrinsic Algorithm                 | 2001 | United States  | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| HubThunder                          | 2015 | Canada         | 1     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Strategic Machine, Inc.             |      | Unknown        | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| AITN                                | 2014 | United States  | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Knowm                               | 2002 | United States  | 1     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Gen Y Solutions                     | 2013 | Unknown        | 1     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| TED Consulting                      | 2016 | France         | 1     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Pttrner                             | 2021 | Japan          | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| Developower                         | 1990 | United States  | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| StatHack                            | 2021 | Japan          | 1     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| CantabPi                            | 2017 | United Kingdom | 1     | [0, 2, 0, 0, 0, 1]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |
| eoda                                | 2010 | Germany        | 1     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not<br>Detected |

*Continued on next page*

| <i>Continued from previous page</i> |      |               |       |                      |             |                          |              |
|-------------------------------------|------|---------------|-------|----------------------|-------------|--------------------------|--------------|
| Company                             | Year | Country       | Staff | Individual Estimates | ML q50 (CI) | ML %                     | Category     |
| Tarah AI                            | 2010 | India         | 1     | [0, 0, 0, 0, 1, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| exvy                                | 2017 | United States | 1     | [0, 0, 1, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Kapahi Industries                   | 2018 | India         | 10    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 0)   | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| GRPS Lab                            | 2018 | India         | 28    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.57%) | Non-zero     |
| IntelligiChain                      | 2017 | United States | 11    | [0, 0, 0, 0, 0, 2]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 9.09%) | Non-zero     |
| Pitt Technology Group               | 1991 | United States | 34    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.94%) | Non-zero     |
| Searchmetrics                       | 2005 | United States | 50    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 4.00%) | Non-zero     |
| HackSoft                            | 2014 | Bulgaria      | 46    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.17%) | Non-zero     |
| Tapptitude                          | 2013 | Romania       | 45    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.22%) | Non-zero     |
| Netguru                             | 2008 | Poland        | 43    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 4.65%) | Non-zero     |
| Objetiva Solução                    | 2009 | Brazil        | 42    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.38%) | Non-zero     |
| EuroCC                              | 2008 | Spain         | 42    | [0, 1, 8, -, -, -]   | 0 (0 - 3) * | 1.90%<br>(0.00% - 7.62%) | Possible     |
| League of Digital Economy           | 2001 | Russia        | 38    | [0, 0, 0, 0, 0, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.63%) | Non-zero     |
| Ventagium Data Consulting           | 2017 | Mexico        | 38    | [0, 1, 0, 0, 0, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.63%) | Non-zero     |
| 3Alica                              | 2010 | United States | 38    | [0, 2, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 5.26%) | Non-zero     |
| Archiot                             | 2018 | India         | 38    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 2.63%) | Non-zero     |
| Eigen                               | 2016 | China         | 36    | [0, 1, 0, -, -, -]   | 0 (0 - 2) * | 2.22%<br>(0.00% - 6.67%) | Possible     |
| Beeby Clark+Meyler                  | 2005 | United States | 35    | [0, 2, 0, -, -, -]   | 0 (0 - 2) * | 2.29%<br>(0.00% - 6.86%) | Possible     |
| Perfsol                             | 2018 | Ukraine       | 33    | [1, 1, 1, -, -, -]   | 0 (0 - 2) * | 2.42%<br>(0.00% - 7.27%) | Possible     |
| Systemware Innovation               | 1978 | Canada        | 26    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| RCI Analytics Intelligence          | 1989 | Brazil        | 32    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.12%) | Non-zero     |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |        |                      |             |                          |              |
|-------------------------------------|------|----------------|--------|----------------------|-------------|--------------------------|--------------|
| Company                             | Year | Country        | Staff  | Individual Estimates | ML q50 (CI) | ML %                     | Category     |
| Kaeyros Analytics                   | 2019 | Germany        | 31     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.23%) | Non-zero     |
| Siali                               | 2018 | Unknown        | 31     | [0, 4, 0, 0, 0, 2]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 6.45%) | Non-zero     |
| Bys Grup                            | 2010 | Turkey         | 30     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.33%) | Non-zero     |
| Datapy                              | 2019 | France         | 29     | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.45%) | Non-zero     |
| XCALE Tech                          | 2016 | Spain          | 29     | [0, 0, 2, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.45%) | Non-zero     |
| NuAlg AI Consulting                 | 2020 | United States  | 29     | [1, 1, 2, 0, 0, 2]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 6.90%) | Non-zero     |
| Chase Consultancy Services          | 2006 | India          | 29     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Lucient                             | 2002 | United States  | 27     | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.70%) | Non-zero     |
| Chipside                            | 2003 | United Kingdom | 27     | [0, 0, 0, 0, 1, 1]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 7.41%) | Non-zero     |
| Jaam Automation                     | 2021 | United Kingdom | 26     | [0, 0, 1, 1, 1, 1]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 7.69%) | Non-zero     |
| Droids Agency                       | 2017 | Denmark        | 26     | [1, 2, 1, 0, 1, 3]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 7.69%) | Non-zero     |
| ESSI Integrated Technologies        | 2003 | India          | 50     | [0, 1, 2, -, -, -]   | 0 (0 - 3) * | 1.60%<br>(0.00% - 6.40%) | Possible     |
| etalytics                           | 2020 | Germany        | 51     | [0, 0, 1, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.92%) | Non-zero     |
| CREA pro                            | 2010 | Slovenia       | 52     | [1, 1, 1, -, -, -]   | 0 (0 - 3) * | 1.54%<br>(0.00% - 6.15%) | Possible     |
| Wednesday Solutions                 | 2020 | India          | 55     | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.64%) | Non-zero     |
| Physics                             | 2021 | Belgium        | 47 000 | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| PricewaterhouseC                    | 1998 | United Kingdom | 5 100  | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| Lucent Technologies                 |      | United States  | 1 000  | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| NEXTGEN                             | 2010 | United States  | 167    | [0, 0, 1, -, -, -]   | 0 (0 - 3) * | 0.48%<br>(0.00% - 1.92%) | Possible     |
| Hcube Conseil                       | 2018 | Algeria        | 140    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.43%) | Non-zero     |
| INT                                 | 1999 | United States  | 140    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.43%) | Non-zero     |

*Continued on next page*



| <i>Continued from previous page</i> |      |                |       |                      |             |                          |              |
|-------------------------------------|------|----------------|-------|----------------------|-------------|--------------------------|--------------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                     | Category     |
| Dragonfly                           | 2018 | United Kingdom | 134   | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.49%) | Non-zero     |
| Intelliarts                         | 1999 | Ukraine        | 113   | [0, 0, 1, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.77%) | Non-zero     |
| InfoPower                           | 1995 | Taiwan         | 112   | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.79%) | Non-zero     |
| Dextra                              | 1995 | Spain          | 109   | [0, 1, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.83%) | Non-zero     |
| STME                                | 1982 | Saudi Arabia   | 109   | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.83%) | Non-zero     |
| Probe Group                         | 1979 | Australia      | 107   | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.87%) | Non-zero     |
| GOX                                 | 2006 | United Kingdom | 103   | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 1.94%) | Non-zero     |
| Metric                              | 2019 | Armenia        | 94    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| MojoTech                            | 2008 | United States  | 80    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 2.50%) | Non-zero     |
| Techspert                           | 2016 | United Kingdom | 73    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| ReqPOOL                             | 2001 | Austria        | 71    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%) | Not Detected |
| TeamOne Group                       | 2009 | China          | 71    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 2.82%) | Non-zero     |
| Exposit                             | 2012 | Poland         | 66    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.03%) | Non-zero     |
| TechSource                          | 1998 | United States  | 66    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.03%) | Non-zero     |
| VS Data                             | 2000 | Brazil         | 64    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.12%) | Non-zero     |
| Exposé                              | 2016 | Australia      | 61    | [0, 0, 4, 0, 0, 1]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.28%) | Non-zero     |
| Partnership on AI                   | 2016 | United States  | 61    | [0, 0, 5, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.28%) | Non-zero     |
| LaunchPad Lab                       | 2012 | United States  | 59    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.39%) | Non-zero     |
| Tagtoo Technology                   | 2013 | Taiwan         | 56    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 3.57%) | Non-zero     |
| Bravinci                            | 2020 | Netherlands    | 26    | [0, 0, 3, 0, 0, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 3.85%) | Non-zero     |
| IceApple Technology Solutions       | 2020 | India          | 24    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.17%) | Non-zero     |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |       |                      |             |                           |              |
|-------------------------------------|------|----------------|-------|----------------------|-------------|---------------------------|--------------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                      | Category     |
| Analytics Town                      | 2016 | United States  | 11    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 9.09%)  | Non-zero     |
| Business Data Solutions             | 2013 | Chile          | 13    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 7.69%)  | Non-zero     |
| MindTitan                           | 2016 | Estonia        | 16    | [0, 3, 1, -, -, -]   | 0 (0 - 2) * | 5.00%<br>(0.00% - 15.00%) | Possible     |
| Priority Technologies               | 2015 | India          | 16    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| TechnoPro India                     | 2019 | India          | 15    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.67%)  | Non-zero     |
| Xpert Data Works                    | 2013 | United States  | 15    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.67%)  | Non-zero     |
| craftworks                          | 2014 | Austria        | 15    | [0, 0, 0, 0, 0, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.67%)  | Non-zero     |
| Seedbox                             | 2020 | Germany        | 15    | [1, 1, 1, -, -, -]   | 0 (0 - 1) * | 5.33%<br>(0.00% - 10.67%) | Possible     |
| AITIL                               | 2004 | Peru           | 15    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.67%)  | Non-zero     |
| Sigma Software                      | 2002 | Ukraine        | 15    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Plantech                            | 2021 | United States  | 14    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 7.14%)  | Non-zero     |
| Cybersift                           | 2017 | United Kingdom | 14    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 7.14%)  | Non-zero     |
| Pentadata Infokom Persada           | 2007 | Indonesia      | 14    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 7.14%)  | Non-zero     |
| TalenTech Digital                   | 2017 | United States  | 14    | [0, 0, 2, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 7.14%)  | Non-zero     |
| idalab                              | 2016 | Germany        | 13    | [0, 2, 0, 0, 1, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 7.69%)  | Non-zero     |
| ITsPeople                           | 2016 | Netherlands    | 23    | [0, 1, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.35%)  | Non-zero     |
| NIBGAT®                             | 2010 | Turkey         | 12    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| Isazi Consulting                    | 2012 | South Africa   | 12    | [1, 1, 1, -, -, -]   | 0 (0 - 1) * | 0.00%<br>(0.00% - 13.33%) | Non-zero     |
| Latam Digital                       | 2017 | Panama         | 12    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| AI Superior                         | 2019 | Germany        | 12    | [0, 1, 5, 0, 1, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| Saige Research                      | 2017 | South Korea    | 12    | [1, 0, 1, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 6.67%)  | Non-zero     |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |       |                      |             |                           |              |
|-------------------------------------|------|----------------|-------|----------------------|-------------|---------------------------|--------------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                      | Category     |
| Irrevo                              | 2005 | United States  | 12    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| Sharpware                           | 2020 | Turkey         | 12    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| SR International                    | 2002 | United States  | 12    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| OVERCODE                            | 2023 | Unknown        | 12    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| Augur IT Consulting                 | 2015 | India          | 12    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 8.33%)  | Non-zero     |
| Gamax Laboratory Solutions          | 1996 | Hungary        | 11    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| The Moonshot Factory                |      | United States  | 11    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 9.09%)  | Non-zero     |
| Rotunda Solutions                   | 2014 | United States  | 16    | [1, 0, 3, 0, 1, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.25%)  | Non-zero     |
| pims.ai                             | 1972 | United Kingdom | 16    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Iexoro                              | 2017 | Germany        | 16    | [1, 1, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.25%)  | Non-zero     |
| Projak Infotech                     | 2016 | India          | 16    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 6.25%)  | Non-zero     |
| Cosmos Thrace                       | 2019 | Bulgaria       | 23    | [0, 1, 1, 0, 0, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.35%)  | Non-zero     |
| Softtact                            | 2003 | India          | 23    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.35%)  | Non-zero     |
| Monadical                           | 2006 | United States  | 23    | [0, 0, 3, 1, 1, 1]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 8.70%)  | Non-zero     |
| Digital Strategy Innovation         | 2020 | Italy          | 22    | [0, 4, 6, 0, 0, 1]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.55%)  | Non-zero     |
| Alltegrio                           | 2012 | United Kingdom | 22    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.55%)  | Non-zero     |
| Rare Mile Technologies              | 2011 | India          | 22    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 4.55%)  | Non-zero     |
| Grenoble Partners                   |      | United States  | 21    | [0, 2, 1, 0, 1, 1]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 9.52%)  | Non-zero     |
| IBM Consulting                      | 1995 | United States  | 21    | [0, 3, 0, -, -, -]   | 0 (0 - 3) * | 3.81%<br>(0.00% - 15.24%) | Possible     |
| Total Synergy Consulting            | 1988 | India          | 21    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| SpecTal                             | 1999 | United States  | 20    | [0, 2, 0, -, -, -]   | 0 (0 - 2) * | 4.00%<br>(0.00% - 12.00%) | Possible     |

*Continued on next page*

| <i>Continued from previous page</i> |      |                |       |                      |             |                           |              |
|-------------------------------------|------|----------------|-------|----------------------|-------------|---------------------------|--------------|
| Company                             | Year | Country        | Staff | Individual Estimates | ML q50 (CI) | ML %                      | Category     |
| Kifwat India                        | 2018 | India          | 20    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.00%)  | Non-zero     |
| ISB Optimus                         | 2011 | South Africa   | 20    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.00%)  | Non-zero     |
| Austin Technology                   | 2012 | Australia      | 20    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.00%)  | Non-zero     |
| The Idea Works                      | 1981 | United States  | 20    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| SoftShark                           | 2021 | Armenia        | 19    | [0, 0, 1, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.26%)  | Non-zero     |
| Data Innovation Labs                | 2018 | United States  | 19    | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 0.00%)  | Not Detected |
| Tensorleap                          | 2020 | Israel         | 19    | [1, 5, 1, 0, 1, 2]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 10.53%) | Non-zero     |
| onepredict                          | 2016 | South Korea    | 19    | [1, 2, 2, 0, 0, 3]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.26%)  | Non-zero     |
| CourtCorrect                        | 2019 | United Kingdom | 18    | [0, 0, 2, -, -, -]   | 0 (0 - 0) * | 0.00%<br>(0.00% - 4.44%)  | Non-zero     |
| Miracle Finland                     | 2007 | Finland        | 18    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.56%)  | Non-zero     |
| Dain                                | 2023 | United States  | 18    | [0, 4, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.56%)  | Non-zero     |
| Spark Wave                          | 2016 | United States  | 18    | [0, 0, 3, 0, 0, 0]   | 0 (0 - 2)   | 0.00%<br>(0.00% - 11.11%) | Non-zero     |
| 5ONE Analytics                      | 2015 | India          | 17    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.88%)  | Non-zero     |
| Hexafold Technologies               | 2022 | India          | 17    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.88%)  | Non-zero     |
| Lund&Bendsen                        | 2001 | Denmark        | 17    | [0, 0, 0, 0, 0, 0]   | 0 (0 - 1)   | 0.00%<br>(0.00% - 5.88%)  | Non-zero     |
| Computer Business System Research   | 1975 | Japan          | 0     | [0, 0, 0, -, -, -]   | 0 (0 - 0) * | -                         | Not Detected |