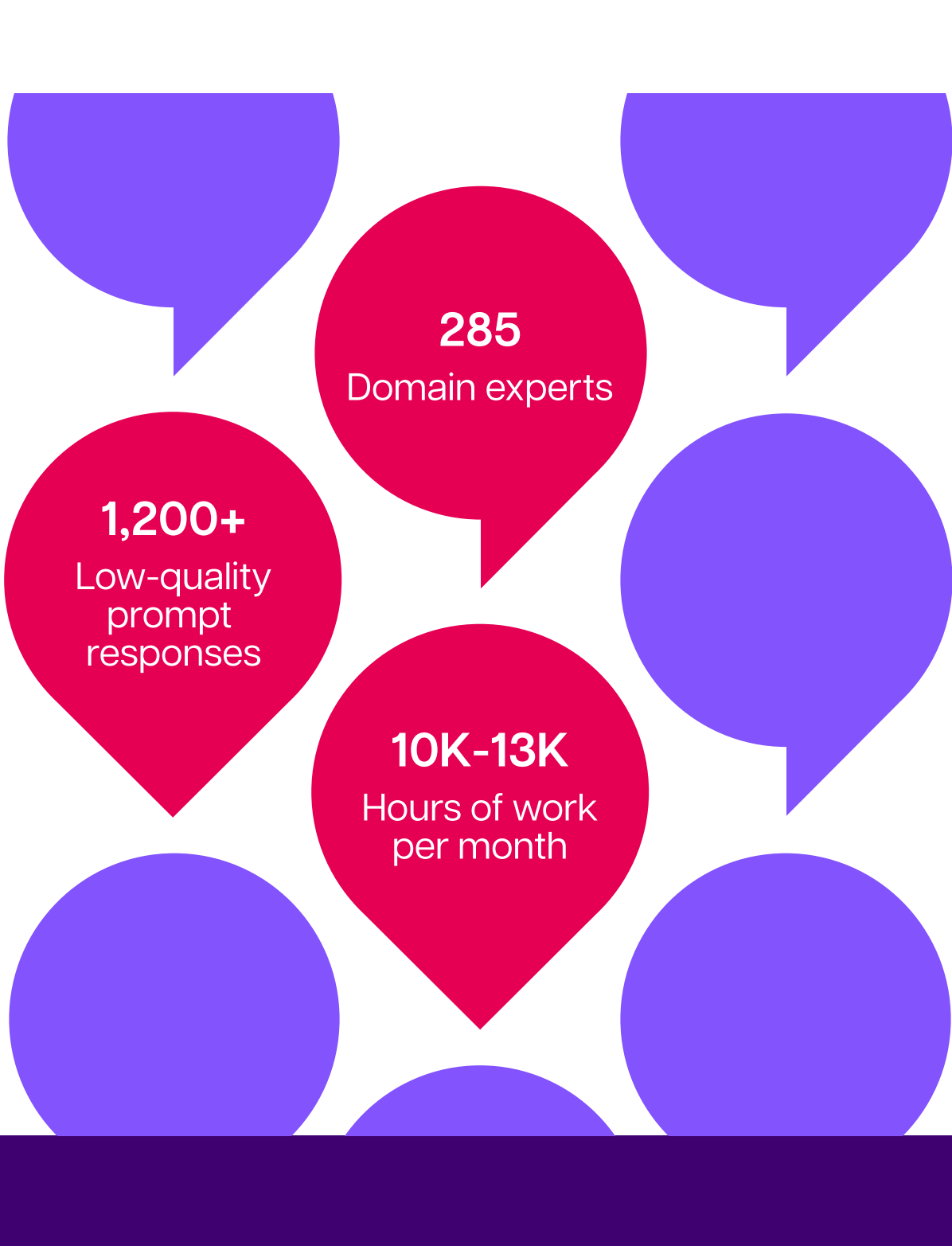


# Big tech company fine-tunes GenAI with TrainAI experts

Our client wanted to fine-tune its GenAI open-source LLM to increase its accuracy, safety and robustness. Realizing those goals would be hard to achieve with a conventional crowdsourcing approach to data annotation, the company reached out to RWS, who leveraged its TrainAI team to quickly recruit, train and manage a scalable team of qualified subject-matter experts as data specialists to complete the work.

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## Key benefits

- 4-week project ramp-up
- 285 domain and language experts onboarded
- 10,000–13,000 hours of work per month at the project's peak
- Supported training and roll-out of the client's latest LLM version
- 1,200+ low-quality prompt-response examples provided

## How do you differentiate a GenAI open-source large language model (LLM) from others on the market? By fine tuning it using feedback from data specialists who are qualified experts in their field.

Many of today's generative AI (GenAI) open-source LLMs have been trained on similar AI training data or content. Our client wanted to improve the usability, robustness and safety of its LLM so that user groups could rely on it more confidently to support innovation and collaboration. In particular, the client wanted the LLM to achieve a standard that would make it a resource for professionals in their own fields globally.

### The client's goals

- Maximize the model's accuracy by training it on specific topic areas
- Improve the model's safety and security by mitigating the risk of it generating hallucinations (nonsensical or false output) or potentially harmful content
- Enhance the multilingual capabilities of the model

The company knew it couldn't achieve those objectives using a conventional crowdsourcing approach that involves farming out data annotation tasks to freelancers or gig workers.

To deliver the differentiated results it was looking for, it needed access to qualified subject-matter and language experts to work as data specialists. Without the in-house resources to quickly recruit, train, manage and scale up such a team, it reached out to RWS – an existing approved vendor for localization and data services – for help.

### Challenges

- Maximize LLM accuracy by training it on specific topic areas
- Improve safety and security by mitigating the risk of generating hallucinations or harmful content
- Achieve a standard that makes the LLM a resource for professionals

### Solutions

- TrainAI from RWS
- Generative AI data services
- Domain expertise: recruiting, training and managing subject-matter experts as data specialists
- Content creation: prompt engineering
- Model fine-tuning: prompt-response QA, fact extraction and verification
- Risk mitigation: red teaming and adversarial testing

### Results

4-week project ramp-up

285 domain experts recruited as part-time RWS employees

10,000–13,000 hours of work per month at the project's peak

Supported training and roll-out of the client's latest LLM version

1,200+ low-quality prompt-response examples provided

## Recruiting the right team of domain and language experts

RWS's dedicated AI practice, TrainAI®, created a comprehensive AI training and fine tuning data services solution to meet the client's objectives. Seasoned data services.

The first step was to recruit experts with university degrees in the client's required fields – general knowledge, business, humanities and STEM (science, technology, engineering and mathematics) – to work as data specialists. Their role was to produce robust, domain-specific content to train and fine-tune the LLM.

To meet initial project needs, TrainAI proposed hiring 100 data specialists, based in locations specified by the client, to work 20 hours a week on the project. When the project scope was expanded from English only to include nine additional languages (French, German, Hindi, Indonesian, Italian, Portuguese, Spanish, Thai and Vietnamese), TrainAI quickly pivoted to incorporate the required languages into its hiring and onboarding plan.

To maintain exclusivity and data confidentiality, RWS employed the specialists as regular part-time employees, not as contractors or freelancers. The TrainAI team worked with RWS's Vendor Resource Management and Talent Acquisition teams to develop a recruitment plan. To hire the right people in the right locations with the right expertise, they leveraged:

- RWS's TrainAI community of AI data specialists across the globe
- RWS Article One Partners (AOP) Connect community (specializing in IP research)
- External recruitment marketing strategies



### Trained and ready to work in four weeks

TrainAI had 100 domain experts hired, tested, onboarded, trained and ready to start work in a short turnaround time. It continued to ramp up recruiting and onboarding efforts to meet client needs, bringing the total number of domain and language experts working on the project to 285.

AI experience wasn't a pre-requisite, so TrainAI trained them on performing LLM fine tuning tasks to meet the client's needs by:

- Converting hundreds of pages of client-provided guidelines, instructions and examples into digestible training courses
- Running multiple live training sessions on project-specific technology tools and tasks

### Virtual desktops for data security

To safeguard the client's data, TrainAI implemented secure infrastructure to minimize the risk of data breach or loss caused by, for example, device damage or theft.

### Delivering LLM fine-tuning services

TrainAI provides the following GenAI services to fine-tune the client's LLM:

- Domain and language expertise
 

**Recruiting and managing domain and language experts**, and triaging tasks to the right experts with the appropriate topic knowledge, educational level and language expertise
- Content creation
 

**Prompt engineering** (or prompt design), which involves the data specialists writing detailed, informative prompt-response pairs on topics in their specialist domains and languages.
- Model fine-tuning: reinforcement learning from human feedback (RLHF)
 

**Prompt-response quality assessment** (QA) including response rating, evaluation, editing and enhancement. A complete qualitative error trend analysis and collection of low-quality examples to improve the model were provided. TrainAI was also responsible for performing quality audits on other third-party vendor work, making RWS the source of truth on quality for the client.

**Fact extraction and verification** including reviewing existing prompt-response pairs, identifying purported facts in the responses, and verifying their authenticity.
- Risk mitigation
 

**Red teaming** to uncover vulnerabilities in the LLM that cause it to generate inaccurate, hallucinatory or potentially harmful responses.

**Adversarial testing**, a subset of red teaming, which involves the data specialists using creative or ambiguous prompts to test model robustness and assess response reliability.

4-week project ramp-up

10,000–13,000 hours of work per month

285 domain and language experts onboarded

## Monitoring and reporting

TrainAI monitors team performance and provides additional training as needed. Any potential issues are proactively identified and resolved. Key metrics, including staffing, completed tasks, average handling time and quality criteria, are tracked against project objectives, and the client receives regular detailed reporting.



Blending technological understanding and human intelligence, TrainAI provides data collection, annotation and validation services for all types of AI data, in any language, at any scale, based on the principles of responsible AI.

## Responsible AI: how it's done

TrainAI's project approach follows the principles of responsible AI to ensure delivery of dependable LLM training and fine-tuning data with the following characteristics.

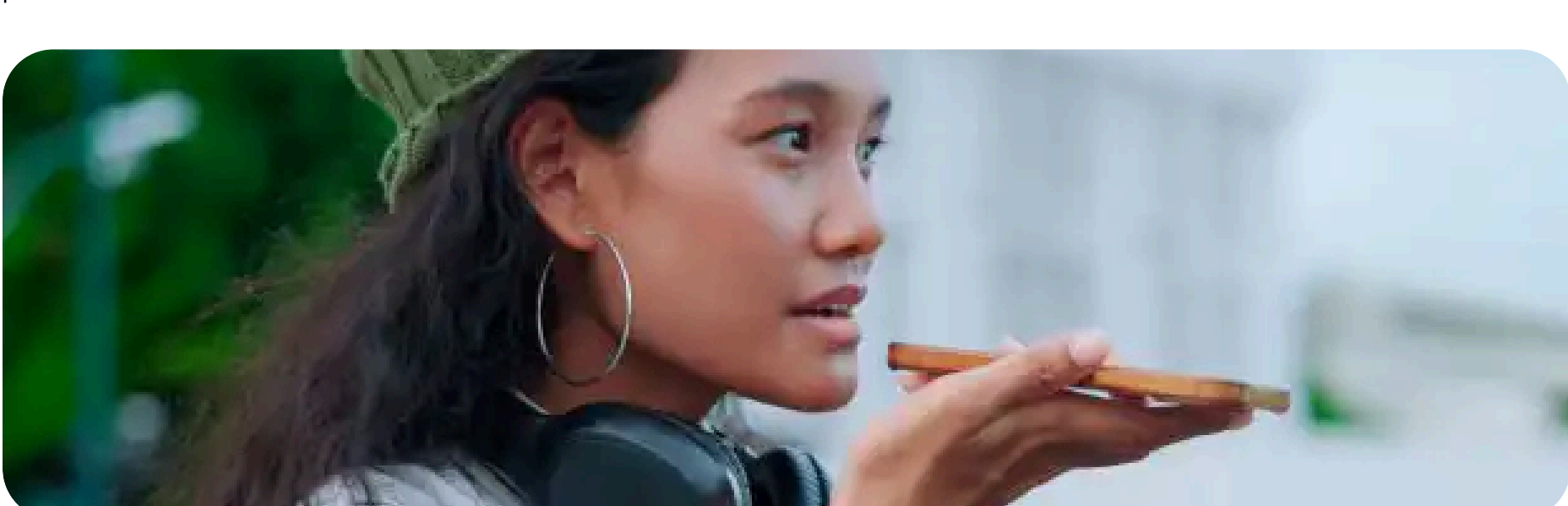
**Ethically sourced.** Instead of crowdsourcing for the project and hoping for the best, TrainAI smart-sourced a team of skilled, qualified and vetted experts to work as data specialists on the project and deliver the required quality output.

**Fair.** Specialists join RWS as regular part-time employees on W-2 contracts. They receive paid training and are compensated fairly for the time they spend working on the project.

**Accurate and reliable.** TrainAI matches domain-specific tasks to the right experts with the right qualifications and expertise to ensure delivery of trustworthy data the client can depend on.

**Transparent and explainable.** The client has visibility into project sourcing and compensation, as well as processes and workflows, for a full understanding of the data and its potential impact on LLM training.

**Private and secure.** TrainAI ensures the privacy and security of project data through a combination of HR, legal and IT best practices.



## Accelerating LLM training and rollout at scale

TrainAI supported the training and roll-out of the latest generation of the client's GenAI LLM by:

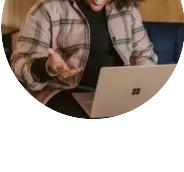
- Ramping up the project within a tight 4-week time frame
- Recruiting and training 285 (to date) qualified domain and language experts as data specialists, working as part-time RWS employees
- Completing 10,000–13,000 hours of work per month at the project's peak

As a result, the client's LLM is well on its way to becoming more accurate, safe and robust, differentiating it from other models on the market.

Satisfied with the project outcomes, the client awarded four additional AI data services projects to TrainAI.

Discover more about TrainAI by RWS

[rws.com/trainai](https://rws.com/trainai)



### Contact us

We provide a range of specialized services and advanced technologies to help you take global further.

Business E-mail\*

First Name\*

Last Name\*

Company Name\*

Job Title\*

Country or Region\*

Additional message\*

Your personal data will only be used to provide you with related product and services information. We use the personal data parties both on and outside the EU that have signed data processing agreements to process your personal data. By entering your personal data you are affirmatively consenting to our use of your personal data and our privacy policy.

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## Dive deeper

Consumer electronics giant trains content moderation AI with 30 moderators in 8 languages

How can you improve the performance of a content moderation AI? Train it with human content moderators across multiple languages.

Read case study →

IT leader boosts OCR AI accuracy with 3.5M transcriptions and 30k image annotations in 32 languages

IT leader turns to TrainAI by RWS to help enhance the accuracy and language capabilities of its OCR engine.

Read case study →

Major tech company improves facial recognition AI for security apps

RWS's TrainAI data collection services were key to helping this global tech giant to train its facial recognition AI with video data.

Read case study →