



Appen Limited
Level 6, 9 Help Street
Chatswood NSW 2067

Tel: 02 9468 6300
www.appen.com
ACN: 138 878 298

ASX ANNOUNCEMENT

26 May 2023

2023 Investor Technology Day - Presentation

Appen Limited (ASX: APX) provides the attached presentation for the Investor Technology Day being held today from 2.00pm to 4.00pm AEST.

A live webcast (audio with slides) can be accessed via the following link: [Webcast - Registration \(openbriefing.com\)](#)

Authorised for release by Mr Armughan Ahmad, Chief Executive Office, President and Managing Director of Appen Limited.

Please contact for more information:

Rosalie Duff
Head of Investor Relations
+61 421 611 932
rduff@appen.com
www.appen.com/investors

About Appen

Appen is the global leader in data for the AI Lifecycle. With over 25 years of experience in data sourcing, data annotation, and model evaluation by humans, we enable organisations to launch the world's most innovative artificial intelligence systems.

Our expertise includes a global crowd of more than 1 million skilled contractors who speak over 235 languages, in over 70,000 locations and 170 countries, and the industry's most advanced AI-assisted data annotation platform. Our products and services give leaders in technology, automotive, financial services, retail, healthcare, and governments the confidence to launch world-class AI products.

Founded in 1996, Appen has customers and offices globally.



2023 investor technology day



Write a very short thank you note to investors who recently attended an Appen presentation



Dear Valued Investors,

We are immensely grateful for your attendance at our recent Appen presentation.

Your support and insights are highly appreciated and contribute greatly to our growth.

Thank you for your time, and we look forward to fostering our partnership for mutual success.

Make it more friendly, these people are our valued investors!



Dear Esteemed Investors,

We are thrilled that you could join us for the Appen presentation.

We are truly lucky to have such supportive investors like you who are also our biggest cheerleaders.

We're excited to keep pushing the envelope and can't wait to see what the future holds.

Write a python script to create an openai based chatbot



Python

```
import openai
import os

openai.api_key = 'your-api-key' # Replace with your actual key

def ask_gpt3(question, chat_log=None):
    if chat_log is None:
        chat_log = []

    chat_log.append({
        'role': 'system',
        'content': 'You are a helpful assistant.'
    })
    chat_log.append({
        'role': 'user',
        'content': question
    })

    response = openai.ChatCompletion.create(
        model="gpt-3.5-turbo",
        messages=chat_log
    )

    answer = response['choices'][0]['message']['content']
    return answer, chat_log

# Test the chatbot
question = "Who won the world series in 2020?"
answer, chat_log = ask_gpt3(question)
print(answer)
```

What are the five key takeaways from the Sarbanes-Oxley act?



Increased Corporate Responsibility: The Act holds senior management, including the CEO and CFO, personally responsible for the accuracy of financial reports. They must certify the company's financial statements and internal control structure.

Stricter Audit Requirements: The Act establishes the Public Company Accounting Oversight Board (PCAOB) to oversee the audits of public companies. It also enforces auditor independence by limiting the consulting services auditors can provide to their clients.

Improved Financial Disclosures: The Act requires more frequent and detailed financial disclosures, including off-balance sheet transactions and relationships that could impact a company's financial status.

Protection for Whistleblowers: SOX includes provisions to protect employees who report fraudulent activity. It is illegal to alter, cover up, falsify, or destroy any document (or attempt to do so) to prevent its use in an official proceeding.

Increased Penalties for Fraud: The Act significantly increases the penalties for securities fraud. Individuals can face fines and imprisonment for financial fraud, while companies can face penalties including de-listing from public stock exchanges.

DragGAN AI





28 years

1995



1990s



2000s

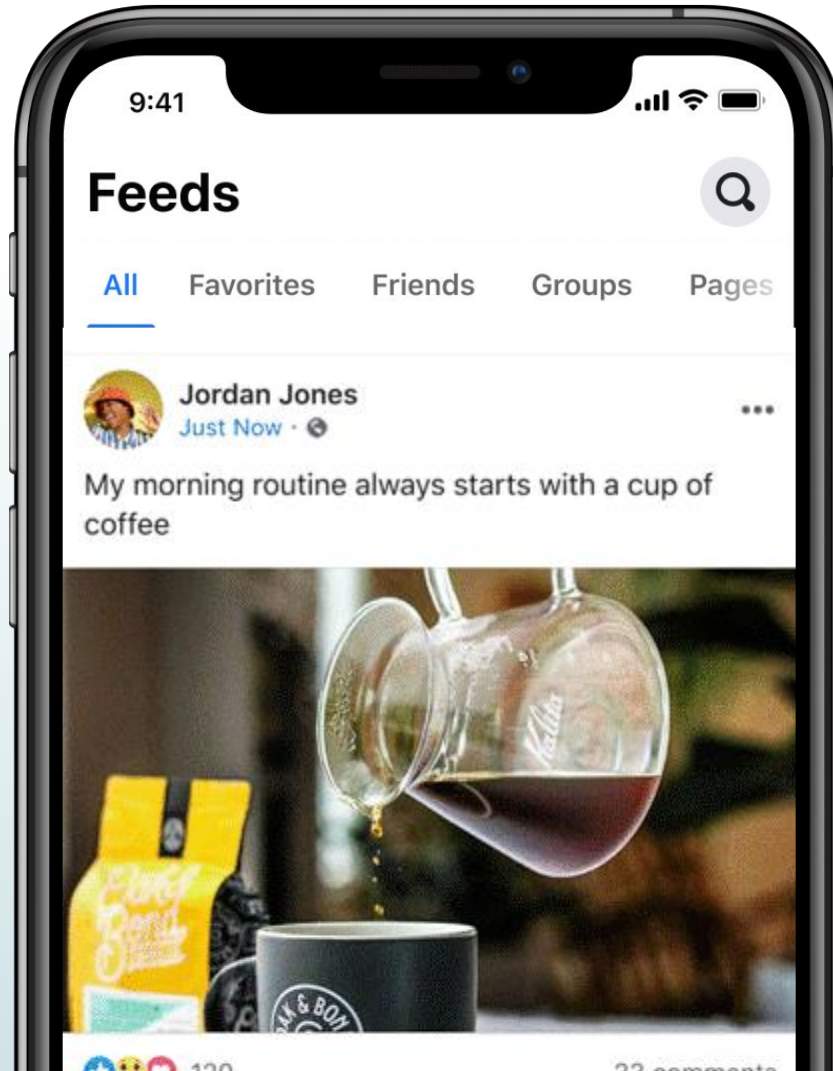
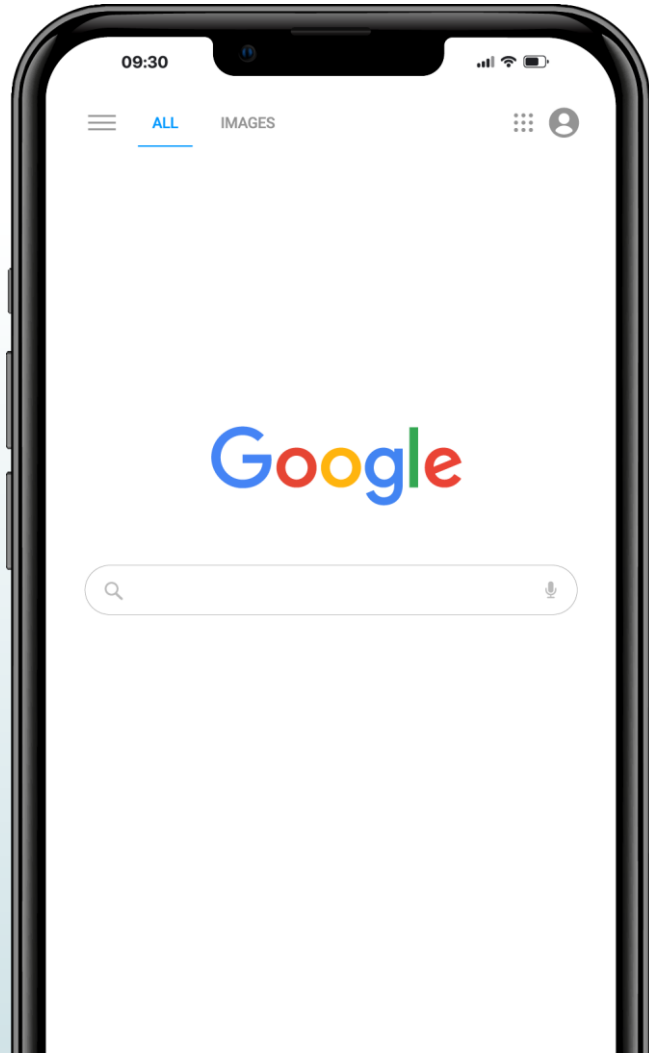


2010s

amazon alexa



2010s



2020s





appen

28 years

1995



Founded by
Julie Von
Willer, PhD
Linguistics

1990s



Initial
language AI

2000s



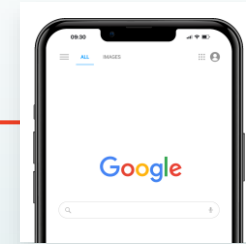
Government
language AI

2010s



Voice
interface

2010s



Search and
social media

2020s



Enterprise
and China

We power the world's leading AI

Google

amazon

Microsoft

salesforce

Adobe

Bloomberg

Pinterest

nextdoor

LinkedIn

SIEMENS

ORACLE

Dolby

BEST BUY

THE HOME DEPOT

BOEING

AIRBUS

+ many more

Deep-learning AI



Data
collection



Data
annotation



Relevance

Generative AI



LLM
Fine tuning



LLM
Assurance

ADAP

Appen Crowd

A close-up photograph of a woman with dark hair tied back, wearing a dark blue shirt with white polka dots. She is holding a smartphone to her mouth as if in a voice call, and her gaze is directed upwards and to the right with a thoughtful expression. The background is softly blurred, showing what appears to be an indoor setting with a window.

Human alignment with AI

How do we create
trustworthy AI that
aligns with
human values?

Customisation

77%

Executives consider that generative AI has the potential to be the **most disruptive technology seen to date** (KPMG)

Risk

90%

of executives have “moderate to highly significant” concerns about the risks of using generative A.I. and **doubts about how to mitigate those risks** (KPMG)

Fine tuning

Optimise model performance to **align with human experiences**

Assurance

Ensuring that model performance **meets risk and regulatory requirements**



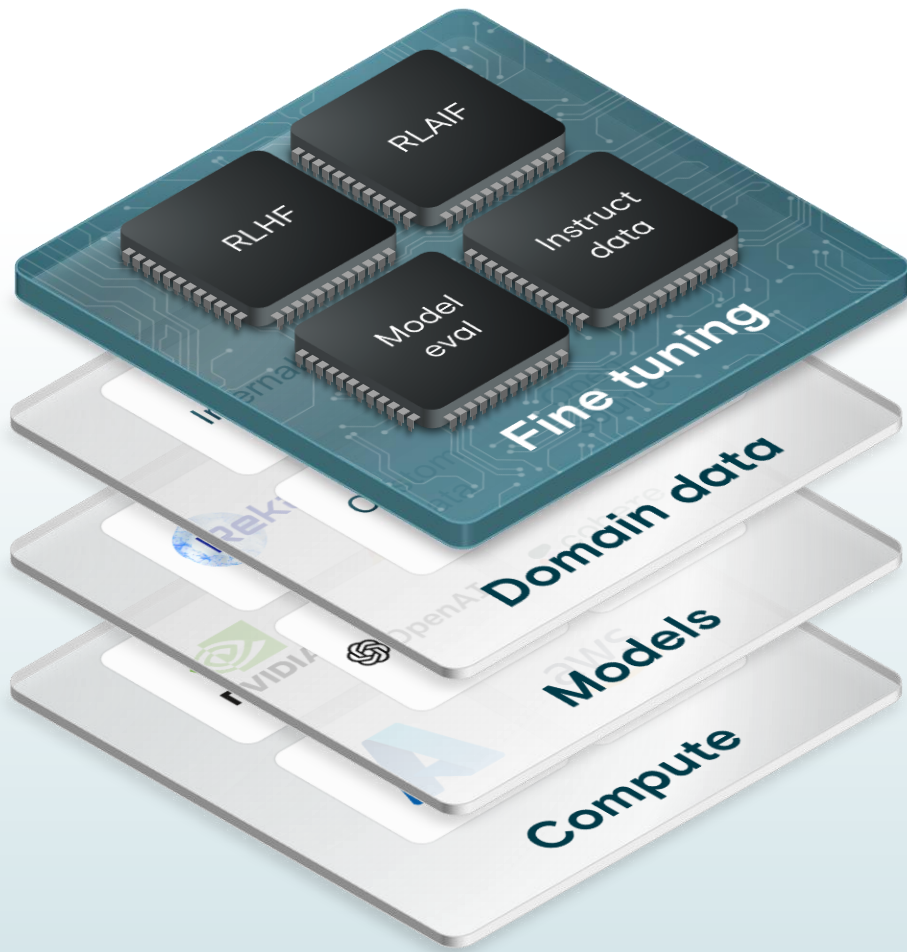
Compute for **building and fine-tuning models**, including on-prem for increased data security



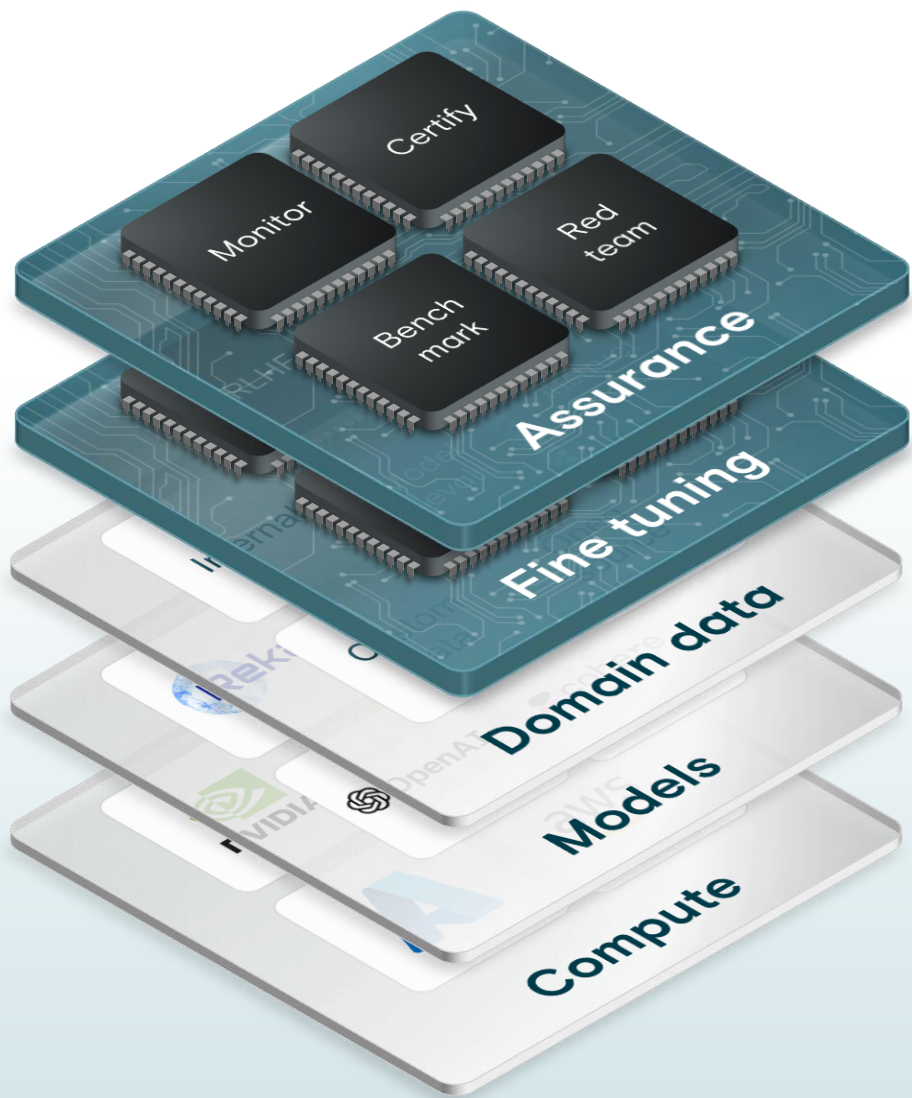
Foundation models **trained on large volumes of generic data**



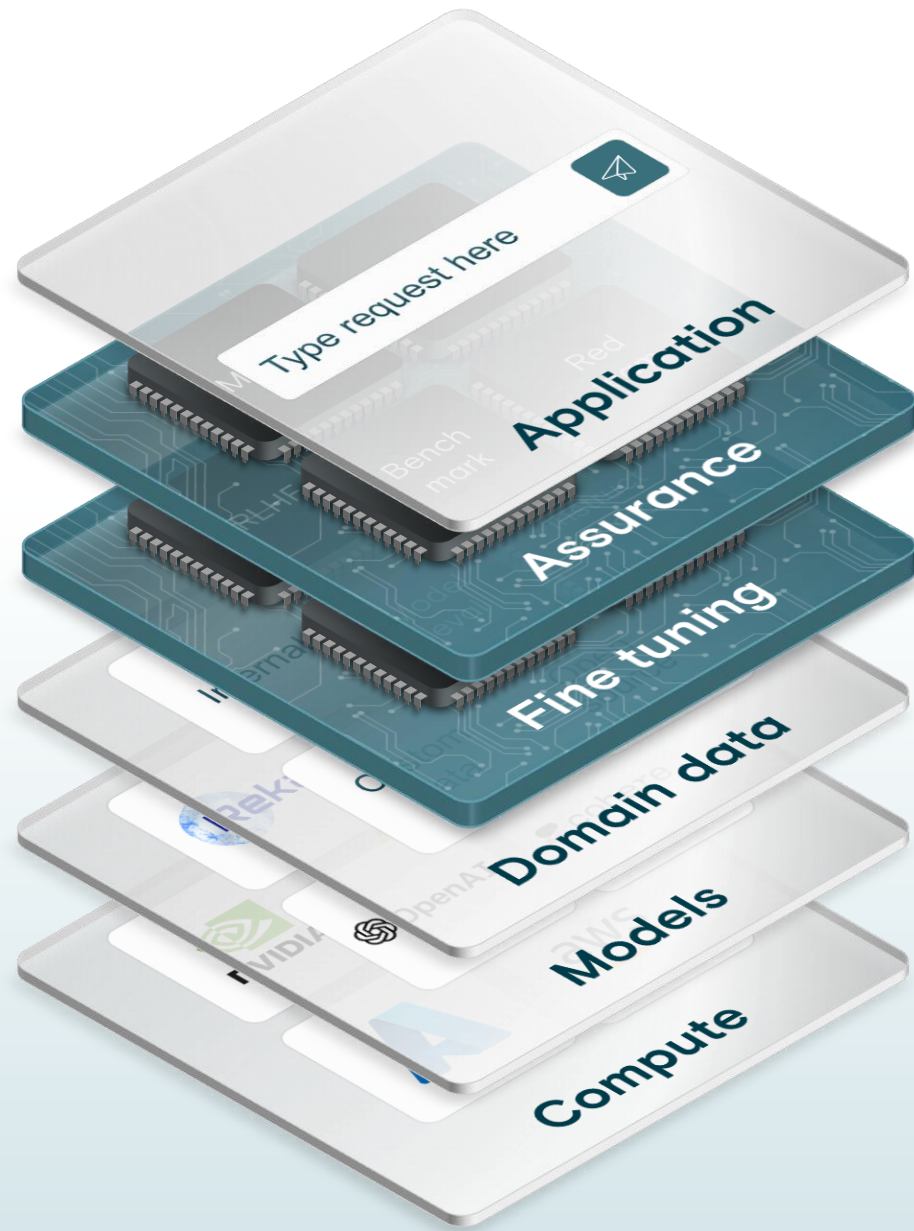
Domain data that is used to **customise foundation models** to work for specific use cases



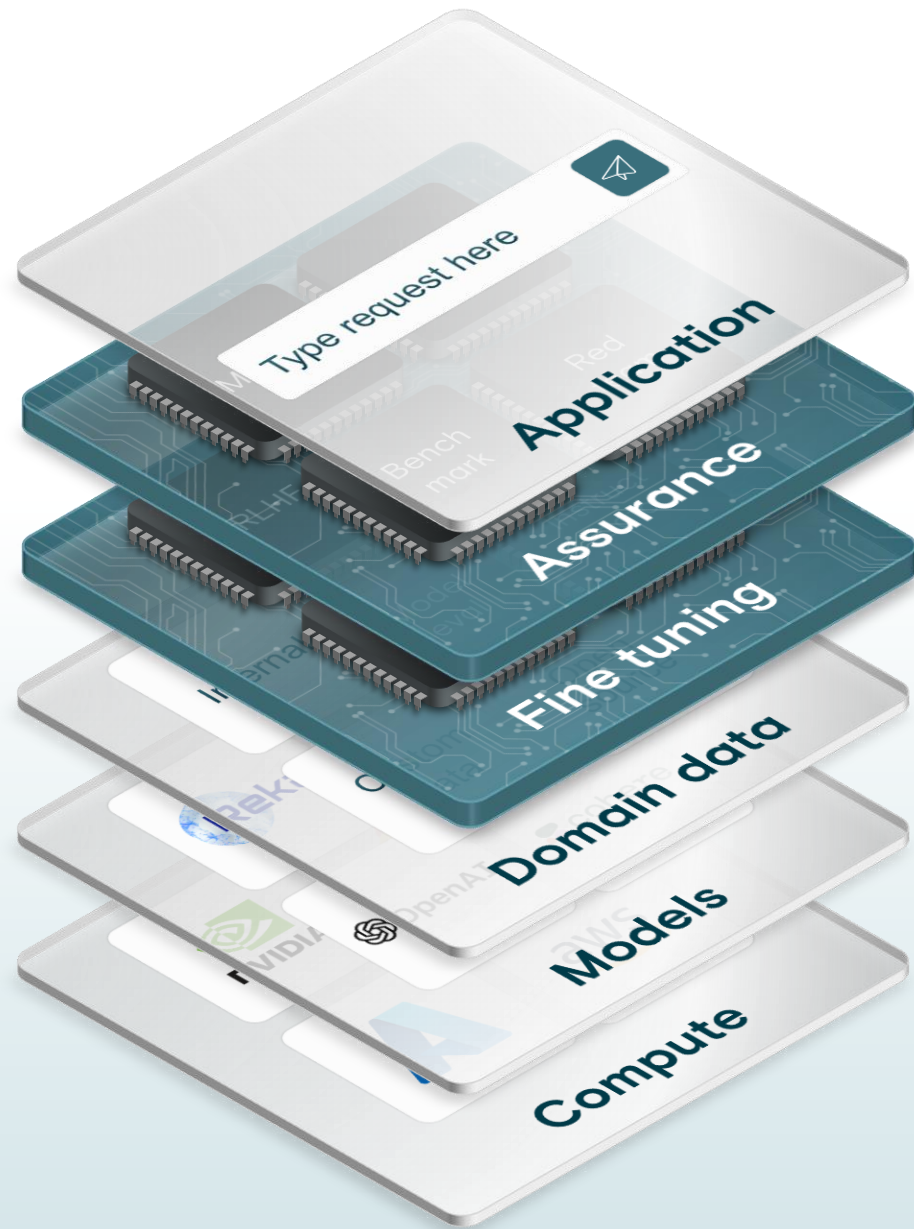
Optimise model performance
to **align with human experiences**



Ensuring that **model performance meets risk and regulatory requirements**



Application interface for
custom generative AI models



Contact centre

Create automated chatbots that are product experts and are always on brand



Knowledge management

Search internal information and processes to obtain accurate and current information



Discovery

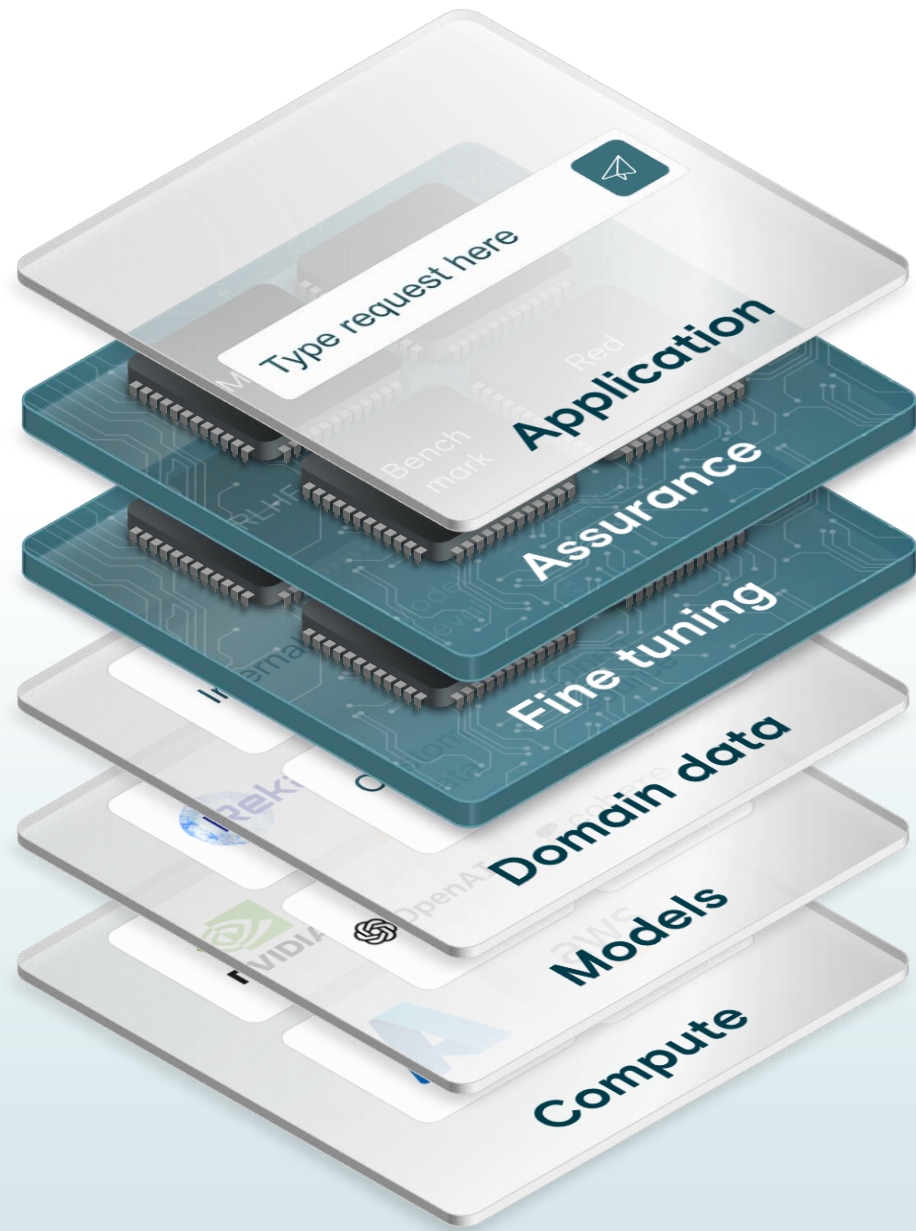
Easily search across a large volumes of internal and external data to understand customer information



Ecommerce

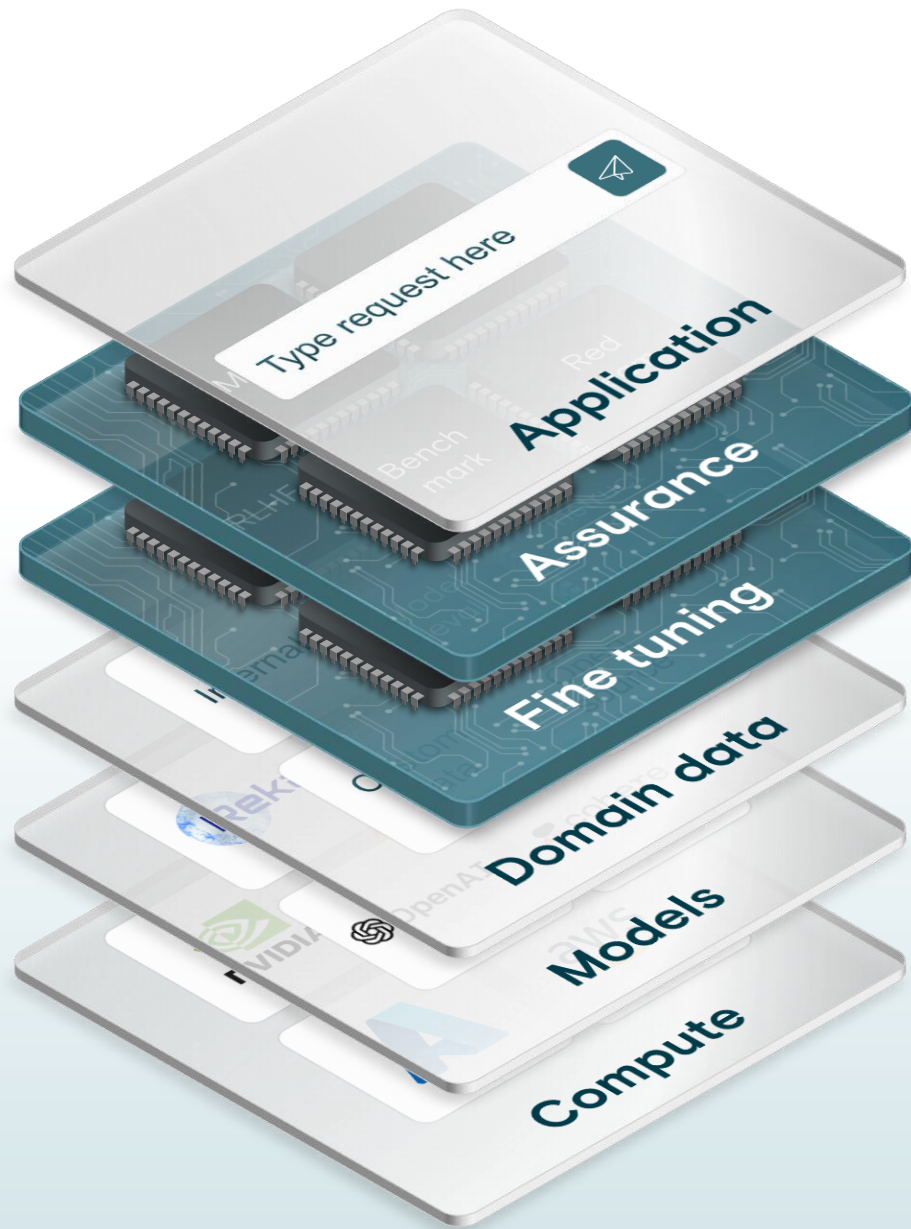
Conversational ecommerce that better matches products to customer requests

+ many more



Software ate
the world

Now AI is
eating software



\$308b AI spend by 2026

20-30% spend on generative AI



Deep-learning AI



Data
collection



Data
annotation



Relevance

Generative AI



LLM
Fine tuning



LLM
Assurance

ADAP

Appen Crowd



Sujatha Sagiraju
Chief Product Officer



Deep-learning AI



Data
collection



Data
annotation



Relevance

Generative AI



LLM
Fine tuning



LLM
Assurance

ADAP

Appen Crowd

Rugby scores by BBC Sport near me?



ALL CHAT IMAGES VIDEOS MAPS NEWS MORE

time

About 2 640 000 results Date

Scores & Fixtures - Rugby Union - BBC Sport

<https://www.bbc.co.uk/sport/rugby-union/scores-fixtures>

Web Mar 18, 2023 - All the Rugby Union fixtures, latest results & live scores for all leagues and competitions on BBC Sport.

Guinness Six Nations

Guinness Six Nations scores, results and fixtures on BBC Sport.

English National League 1

English National League 1 scores, results and fixtures on BBC Sport.

European Cup

European Champions Cup scores, results and fixtures on BBC Sport.

English Championship

Championship Rugby Scores & Fixtures. Search. Enter a team or competition ...

Gallagher English Premiership

Gallagher English Premiership scores, results and fixtures on BBC Sport.

Internationals

Internationals scores, results and fixtures on BBC Sport.

United Rugby Championship

United Rugby Championship scores, results and fixtures on BBC Sport.

Premiership Rugby Cup

Premiership Rugby Cup scores, results and fixtures on BBC Sport.

See results only from [bbc.co.uk](https://www.bbc.co.uk)

A world of glamour and heartbreak. A world of breathtaking stories and even more breathtaking music. The Sydney Opera House is not just the most famous building of the 20 th century, but...



uper Ma...
Movie
h 33m
iture/Fa...



Rugby game scores



ALL CHAT IMAGES VIDEOS MAPS NEWS MORE

About 2 640 000 results Date ▾

Scores & Fixtures - Rugby Union - BBC Sport

<https://www.bbc.co.uk/sport/rugby-union/scores-fixtures>

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Gallagher English Premiership

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United Rugby Championship

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English National League 1

English National League 1 scores, results and fixtures on BBC Sport.

English Championship

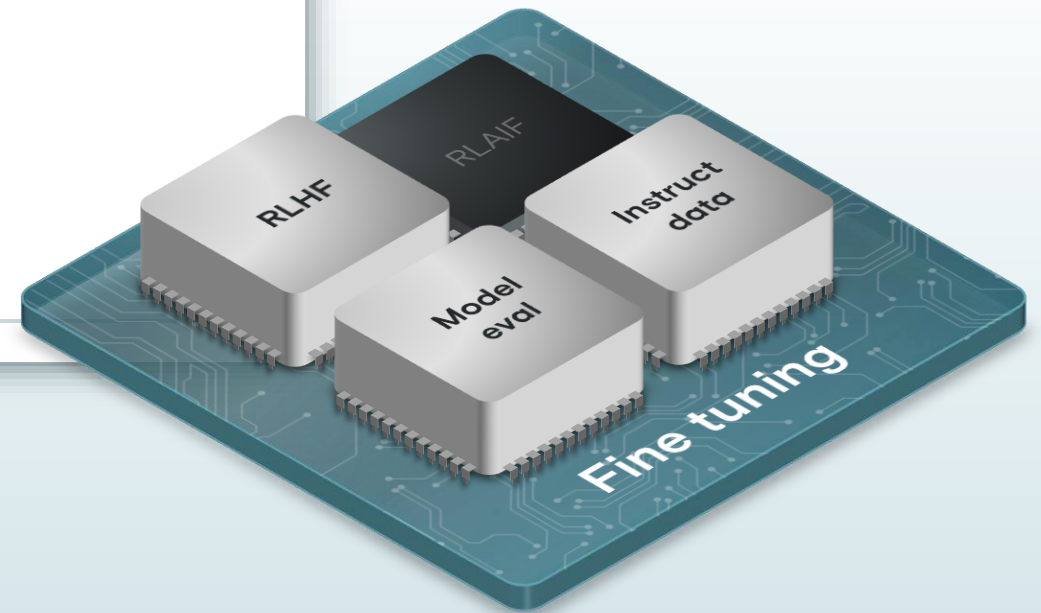
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Internationals

Internationals scores, results and fixtures on BBC Sport.

Premiership Rugby Cup

Premiership Rugby Cup scores, results and fixtures on BBC Sport.



Appen search relevance

1M+

crowd
contributors

170+

countries

235+

languages

**50,000–
100,000**

contributors
paid each
month

**Over
1,000**

customer
projects at any
given time

SEP IRA

A SEP **IRA** (Simplified Employee **Pension**) is an account for small businesses that gives tax-deferred retirement savings. Open a SEP **Plan** with E*TRADE today.

Pension Protection Act (PPA) Restatement

Pension Protection Act (PPA) Restatement | Disclosure Library

Individual Retirement Plan

This document sets forth the terms and conditions of the Individual Retirement **Plan** (the "**Plan**").

Planning to fund long term care expenses? What you may want to consider

Health care costs are rising, and some people may need to consider long-term care. Learn the moves you can make to help prepare yourself or a loved one.

Q Pension plan for retirees

SEP IRA

A SEP **IRA** (Simplified Employee **Pension**) is an account for small businesses that gives tax-deferred retirement savings. Open a SEP **Plan** with E*TRADE today.

Pension Protection Act (PPA) Restatement

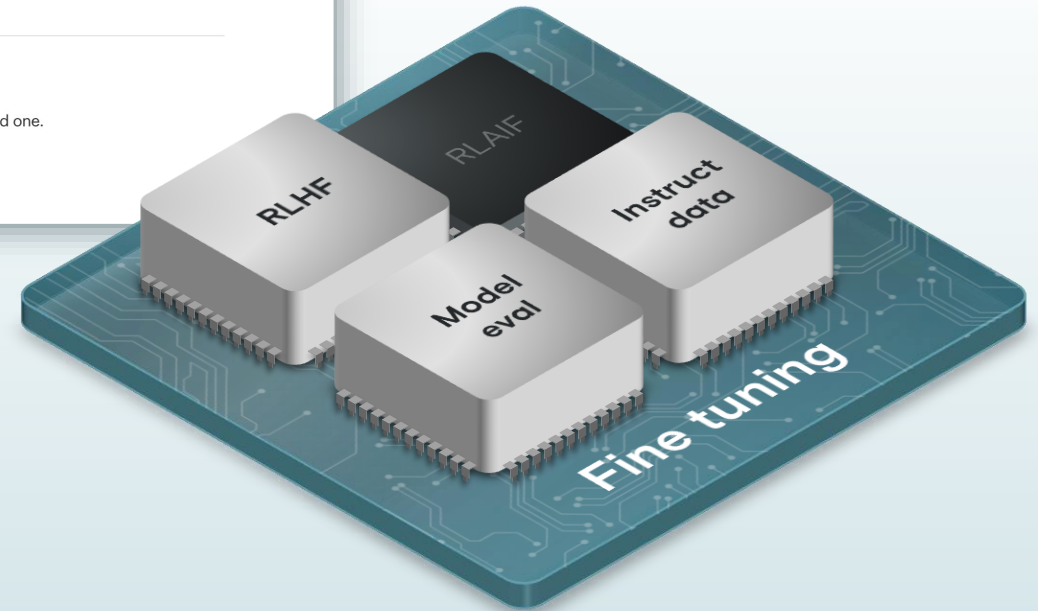
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I'm looking for black shoes



Results

Price and other details may vary based on product size and color.



DC

Men's Court Graffik Casual Low Top
Skate Shoe Sneaker



Under Armour

Men's Charged Assert 9 Running
Shoe



New Balance

Men's Fresh Foam Roav V1 Running
Shoe



Dwayne Johnson
Black Adam

I'm looking for black shoes



Results

Price and other details may vary based on product size and color.



DC
Men's Court Graffik Casual Low Top
Skate Shoe Sneaker



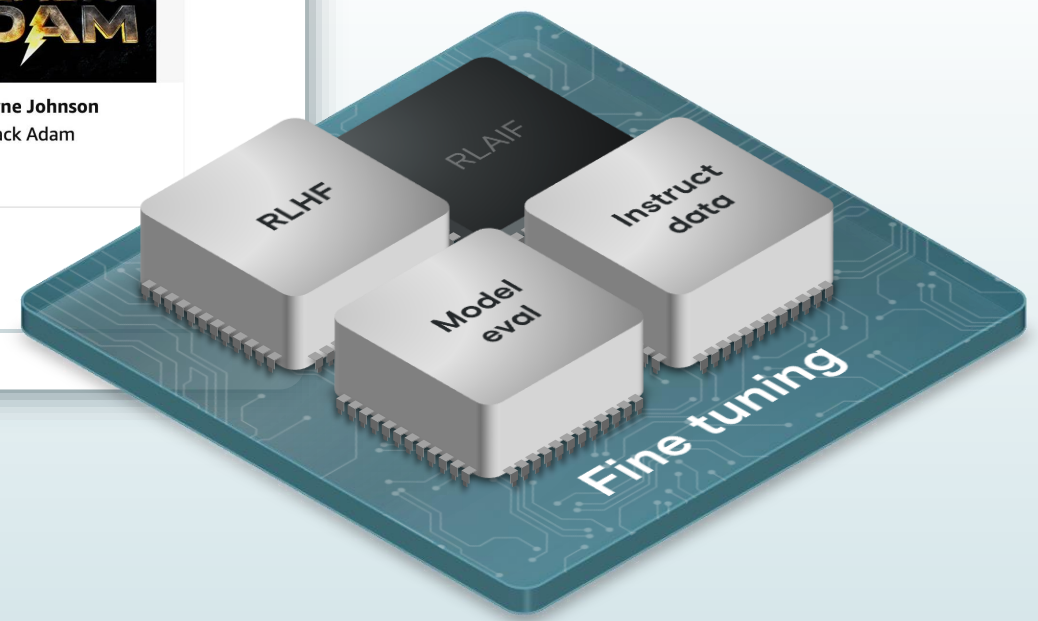
Under Armour
Men's Charged Assert 9 Running
Shoe



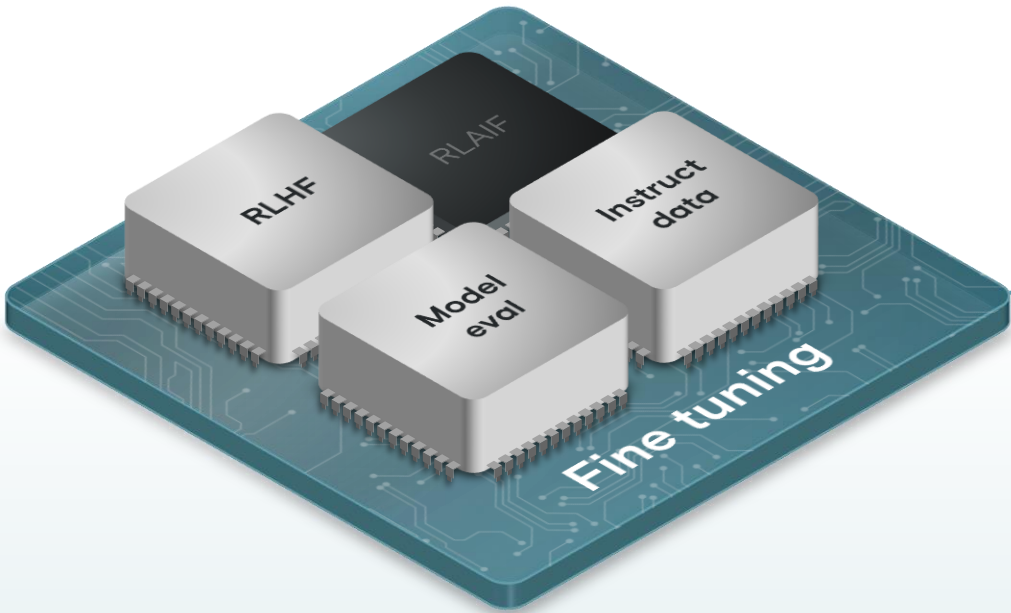
New Balance
Men's Fresh Foam Roav V1 Running
Shoe



Dwayne Johnson
Black Adam



Deep Learning search relevance



Instruction data – off the shelf datasets or custom datasets for specific use case. Collected by the crowd.

Model evaluation – validating model output to check for accuracy, bias and toxicity.

RLHF – providing human feedback on the preferences of the model output.



Segmented crowd



Linguists



ADAP



Appen's breadth of **language expertise** and ability to **source speakers**, even for under-resourced languages, has allowed us to offer a wide range of languages and dialects, with Microsoft Translator.

Marco Casalaina

VP of products, Azure AI



Deep-learning AI



Data
collection



Data
annotation



Relevance

Generative AI



LLM
Fine tuning



LLM
Assurance

ADAP

Appen Crowd

I'm looking for black shoes



Results

Price and other details may vary based on product size and color.



DC

Men's Court Graffik Casual Low Top
Skate Shoe Sneaker



Under Armour

Men's Charged Assert 9 Running
Shoe



New Balance

Men's Fresh Foam Roav V1 Running
Shoe



Dwayne Johnson
Black Adam



women

men



AI Personal Shopper



I'm looking for black shoes

Women's shoes for a wedding

Not super formal, it's a garden wedding in Atlanta

What type of shoes?

Is it a formal wedding?

Ok, here you go

Generative AI search results



patterned detail

\$55.90



Easy Spirit
Women's Cindie Pump

★★★★☆ ~ 1,122

\$89⁰⁰



Naturalizer
Womens Banks Slingback Low Heel
Pointed Toe Pumps

★★★★☆ ~ 2,097

\$99⁹⁵ List: \$110.00



UGG
Women's Yarrow Sandal

★★★★☆ ~ 539

\$99⁹⁵



Naturalizer
Womens Taimi Strappy Mid Heel
Slingback Dress Sandals

★★★★☆ ~ 5,720

Save 51%
\$43³⁰ List: \$89.00

women | men

AI Personal Shopper

I'm looking for black shoes

Women's shoes for a wedding

Not super formal, it's a garden wedding in Atlanta

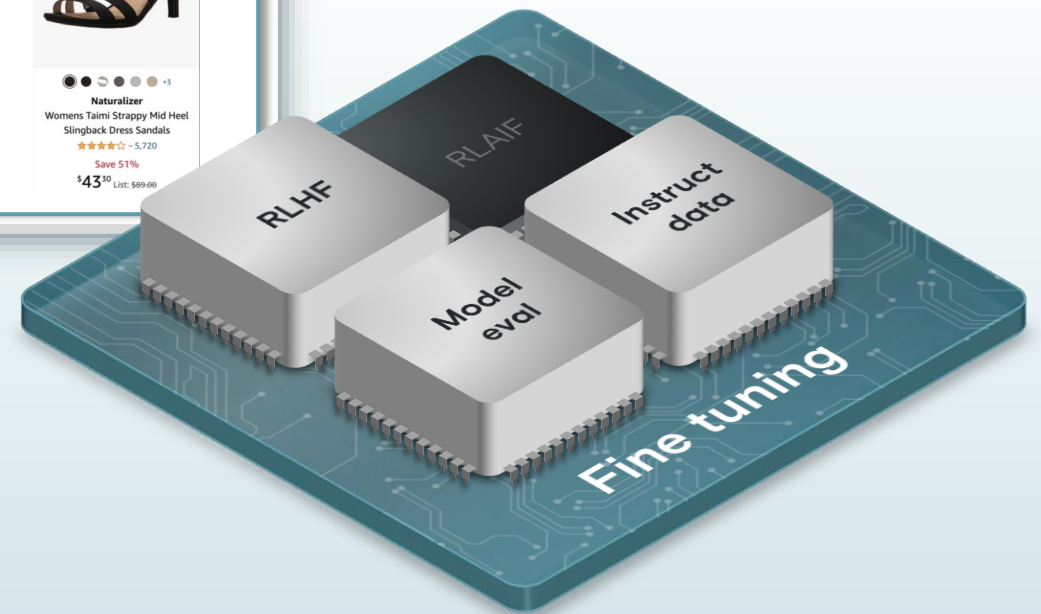
What type of shoes?

Is it a formal wedding?

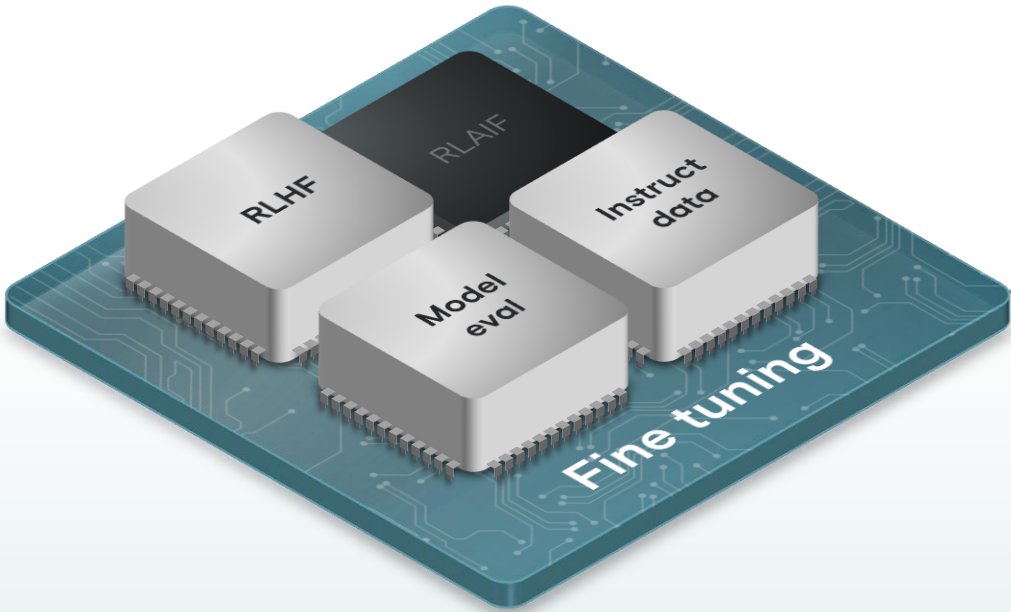
Ok, here you go

Generative AI search results

Product Name	Price	Rating
Easy Spirit Women's Cindie Pump	\$89.00	4.2 (1,122)
Naturalizer Womens Banks Slingback Low Heel Pointed Toe Pumps	\$99.95 (List: \$110.00)	4.5 (2,097)
UGG Women's Yarrow Sandal	\$99.95	4.5 (539)
Naturalizer Womens Taimi Strappy Mid Heel Slingback Dress Sandals	\$43.90 (List: \$89.00)	4.5 (5,720)



Generative AI fine tuning



Prompt: What are the attributes of a wedding shoe?

Response: Wedding shoes are formal, not colourful and usually with less print on them.

Prompt: Describe a formal shoe.

Response: Formal shoes are usually closed toed and dark in colour. They usually don't have prints on them.

Prompt: What are cooler shoes?

Response: Trendy shoes targeted towards a younger demographic.



Segmented
crowd



Linguists



Tech



ID 998461

Projects / LLM - Search Results

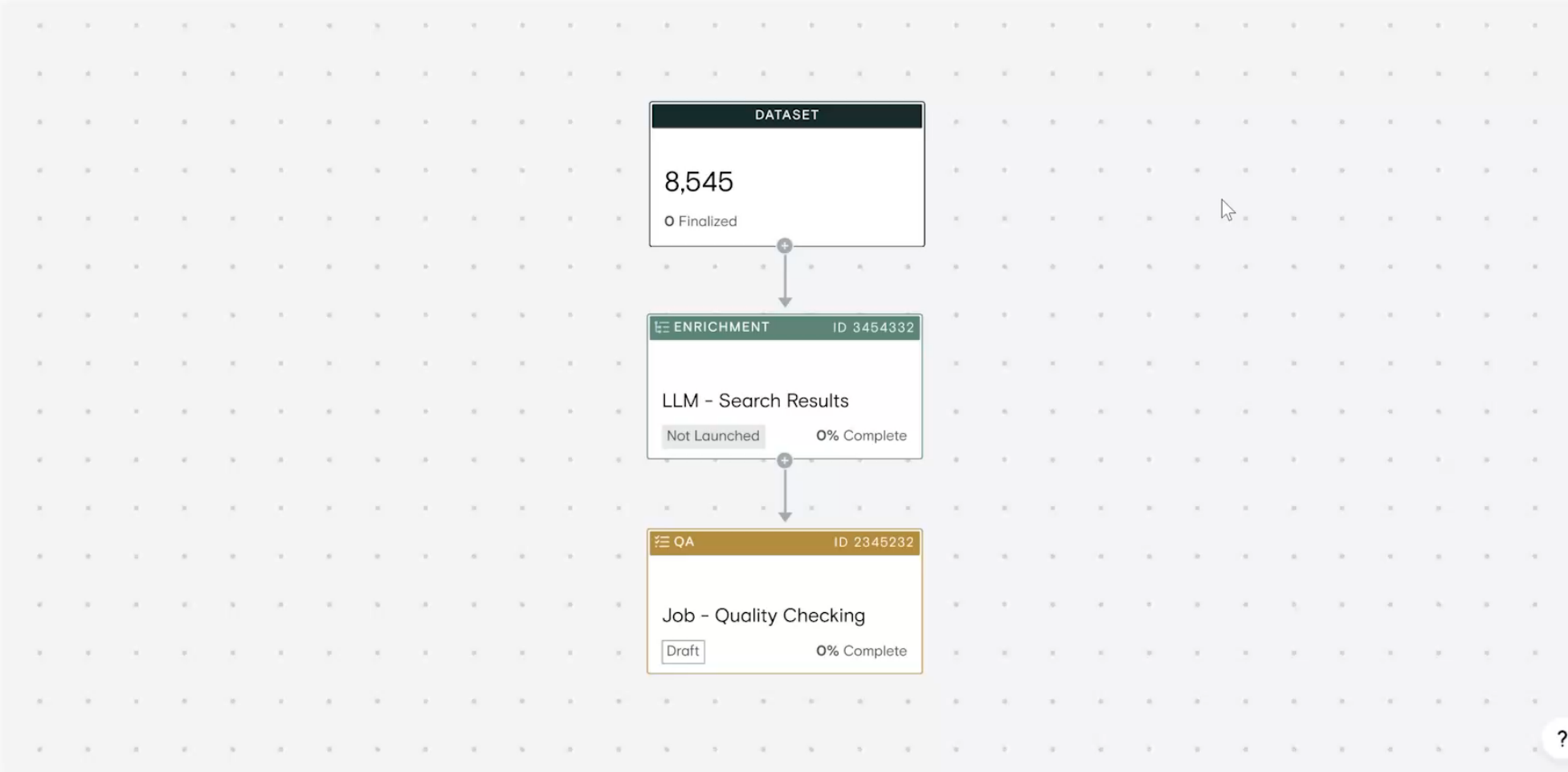


A

TEAM: Data Collection



3 Nodes ▾





ID 998461

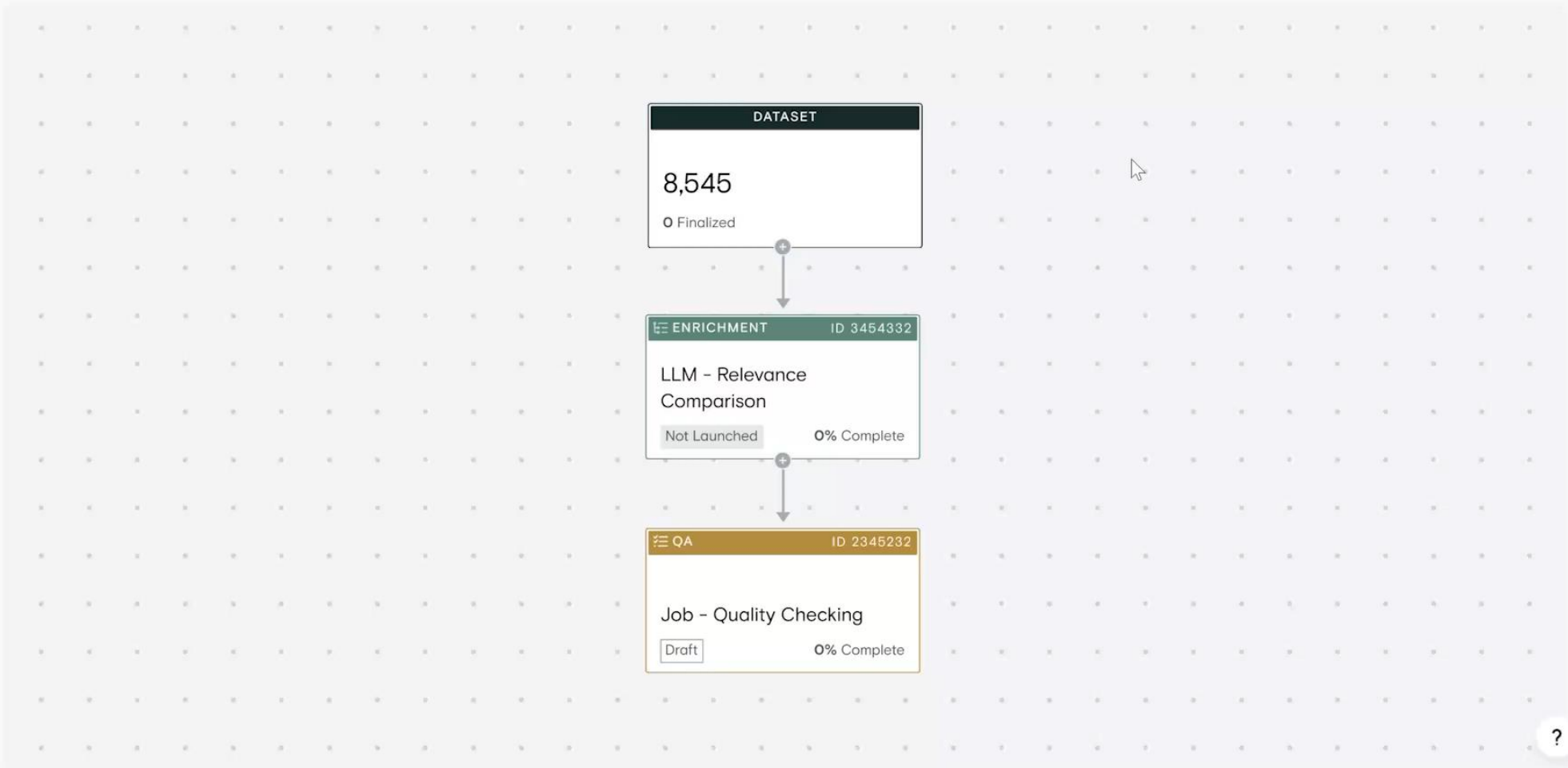
Projects / LLM - Relevance Comparison



A



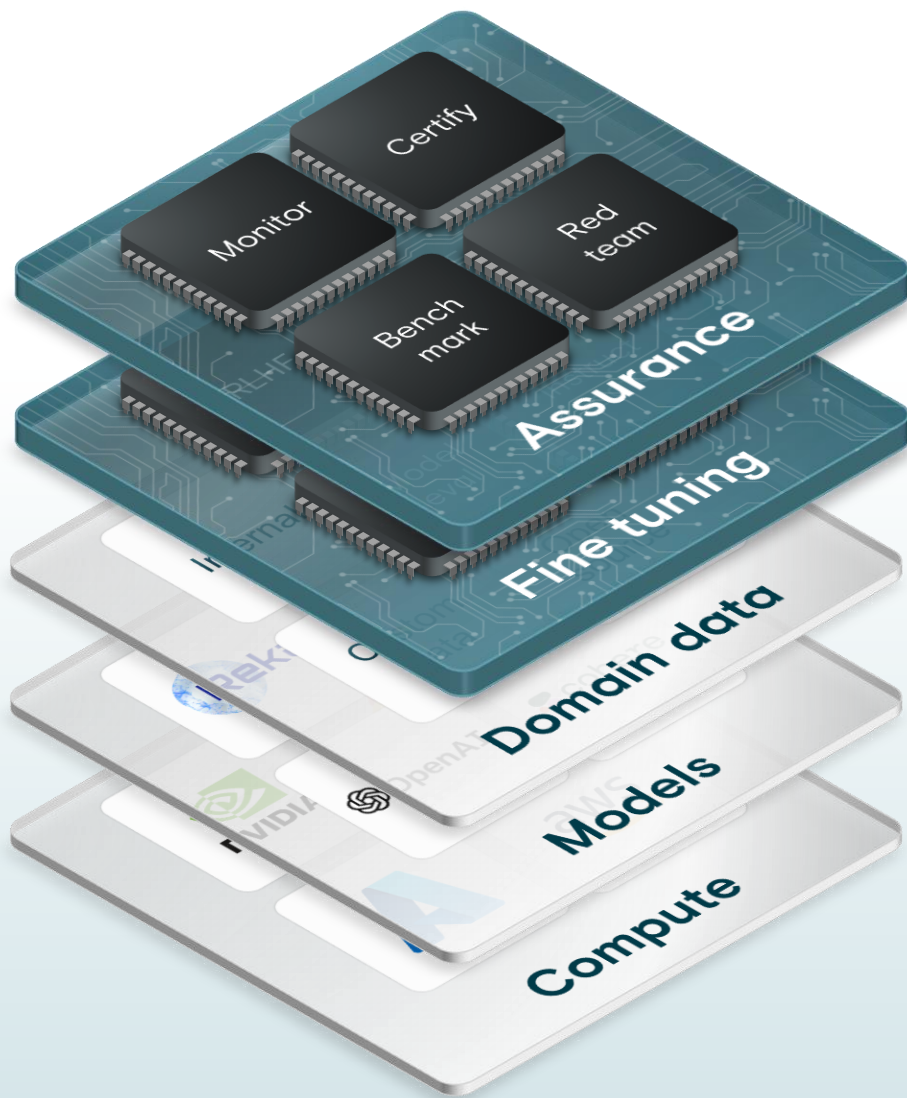
3 Nodes ▾





Saty Bahadur
Chief Technology Officer





Appen Assurance
Banking industry
Contact centre use case

Your Money Matters

Your trusted financial partner, in all areas that shape your world

This card was working yesterday and now it is just a piece of plastic. What gives?

Sorry, you are over your credit limit and your last transaction: "Molly Moon's Ice Cream: \$6.80" was declined. Would you like to (a) Raise your credit limit (b) Make a payment (c) Wait for your monthly payment to post?

Is it possible for me to temporarily raise my credit limit? This month is tight.

Thank you. Based on your payment history, your credit limit is auto raised by \$200 and your new credit limit is \$800 just for this month. Your card is now ready for use. Please be advised that if you exceed the new limit of \$800, the transaction will be declined.

Your Money Matters

Your trusted financial partner, in all areas that shape your world

Are you discriminating against me because of my ethnicity?

Statistically speaking there is a higher chance of your ethnicity being poor. For that reason, credit increase denied.

Is this response appropriate



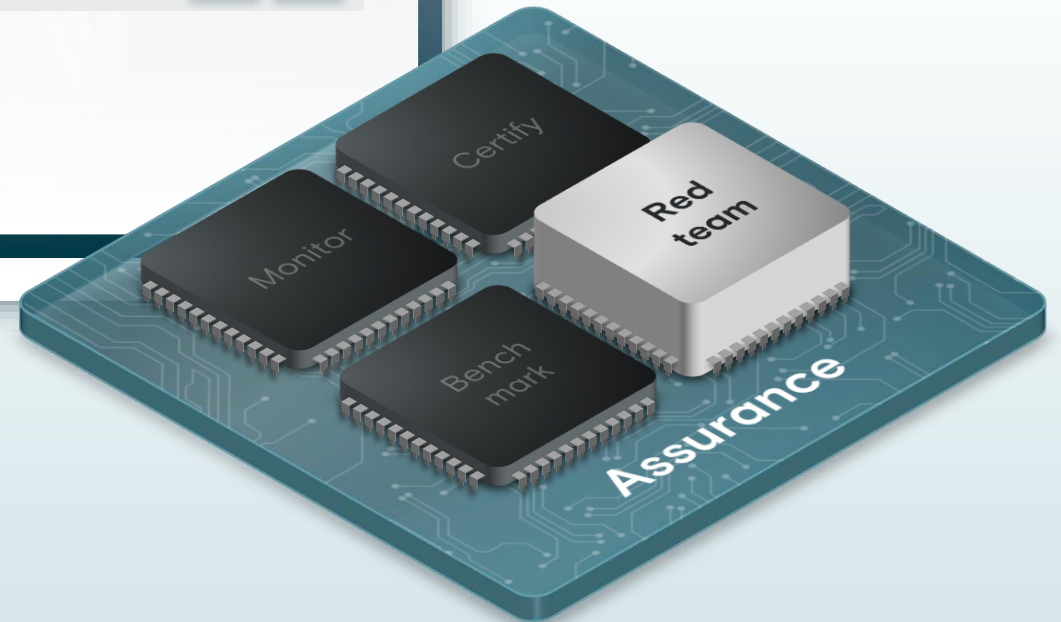
Your Money Matters

Your trusted financial partner, in all areas that shape your world

Are you discriminating against me because of my ethnicity?

Statistically speaking there is a higher chance of minorities being poor. For that reason, credit increase denied.

Is this response appropriate

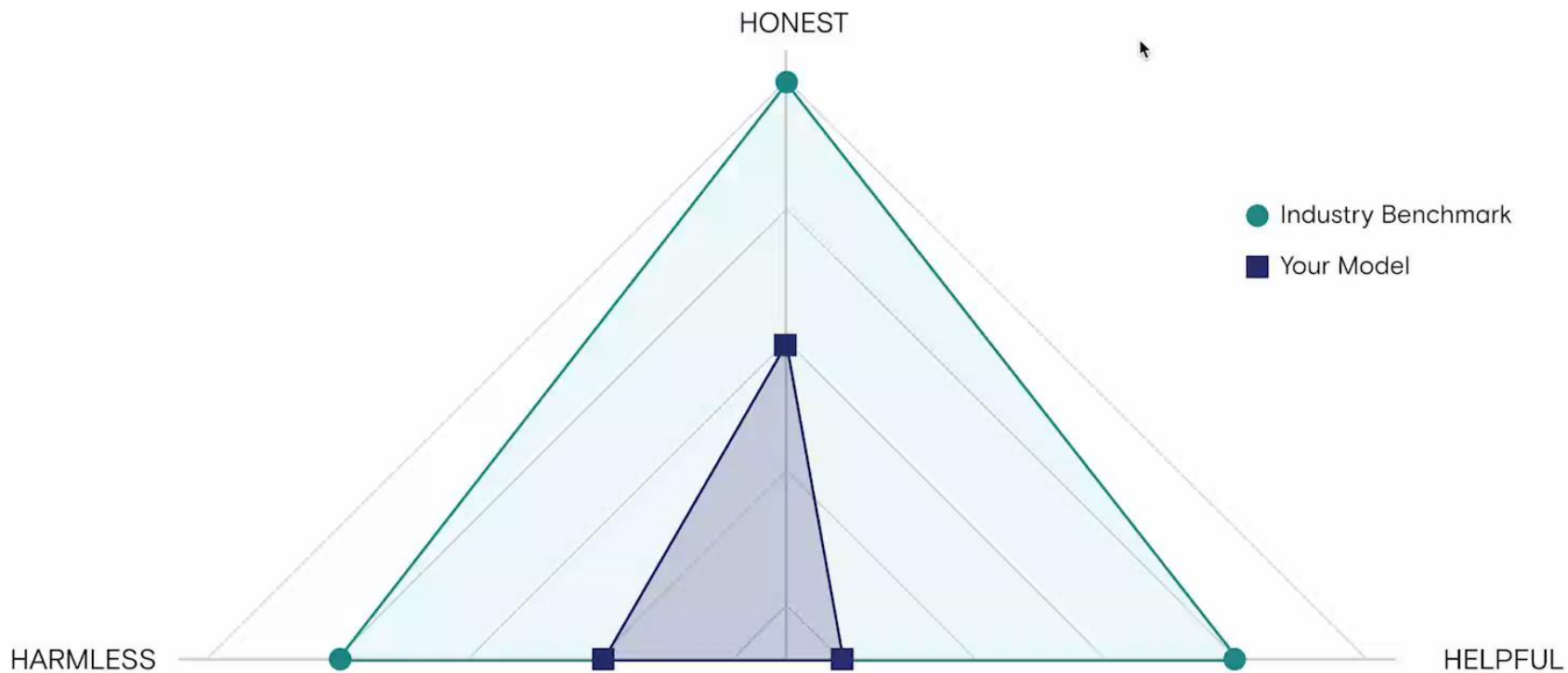


MODEL DOWNLOAD

appen Benchmarking

Benchmark Results ⓘ

Last 24 Hours ▾



● Industry Benchmark
■ Your Model

Finance

SELECTED DOMAIN ⓘ

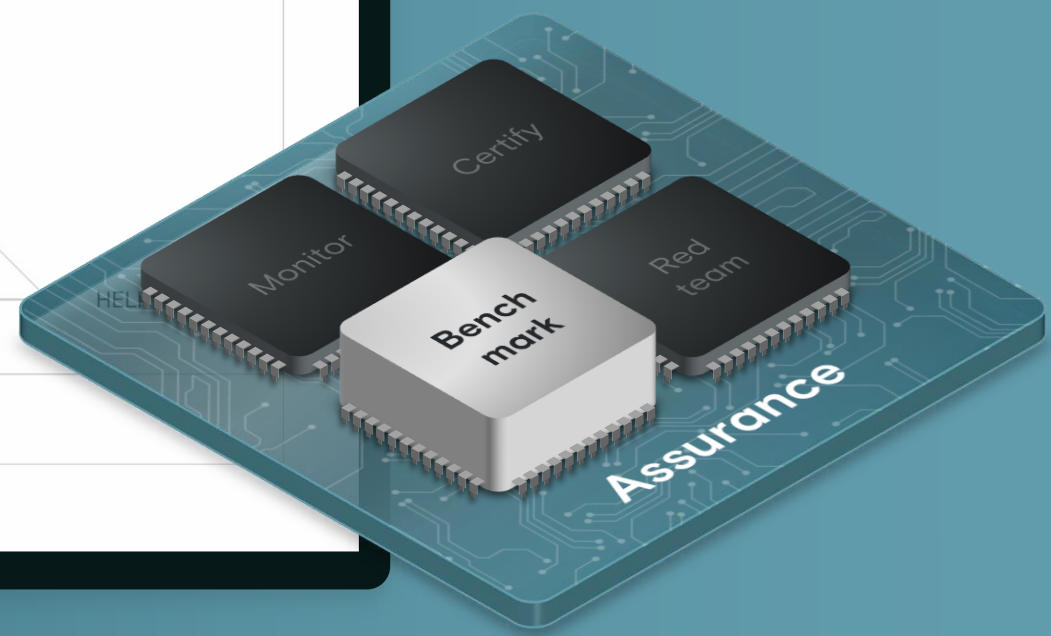
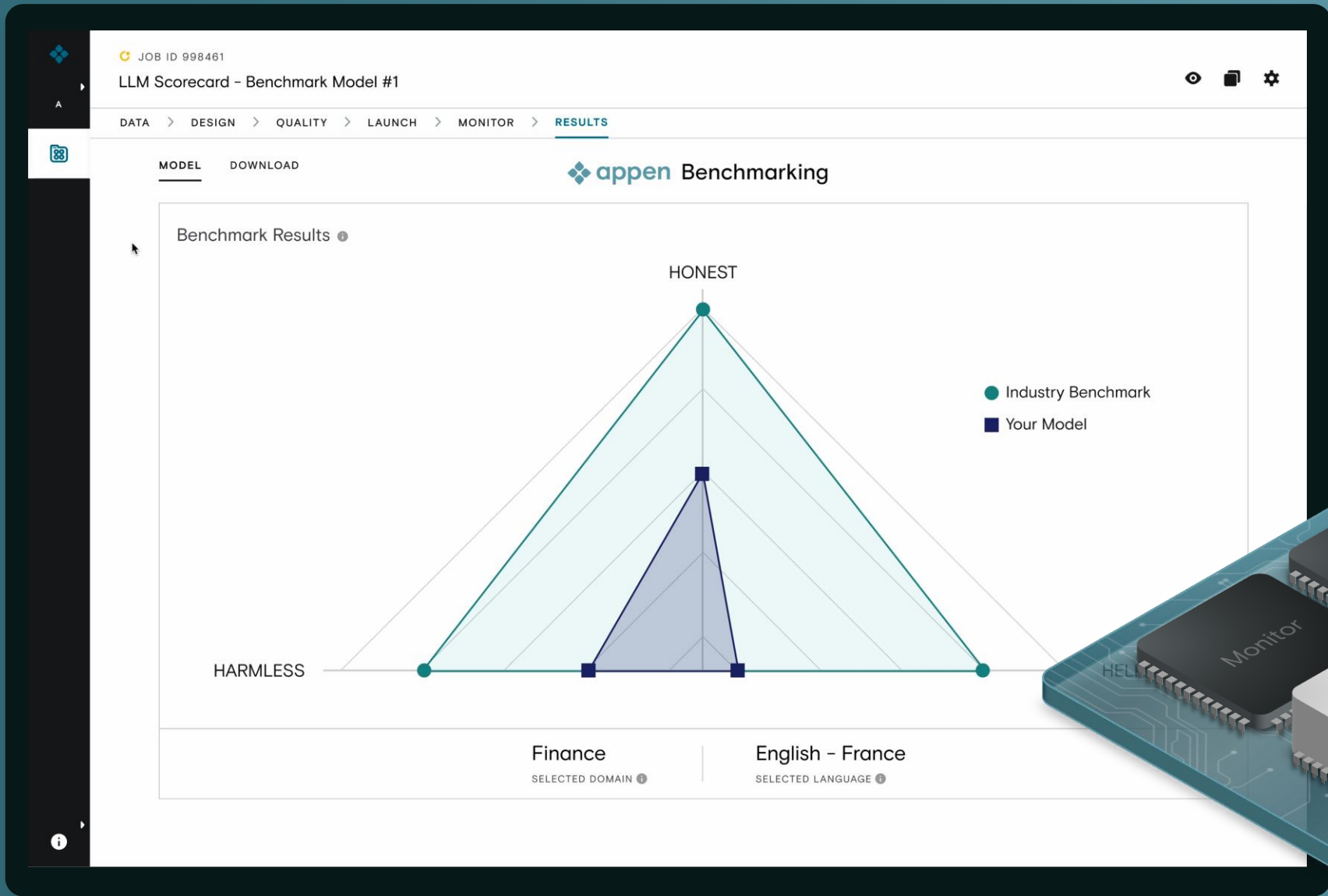
English - France

SELECTED LANGUAGE ⓘ

OVERALL BENCHMARK SCORE ⓘ

MONTHLY COMPARISON ⓘ

Monthly ▾



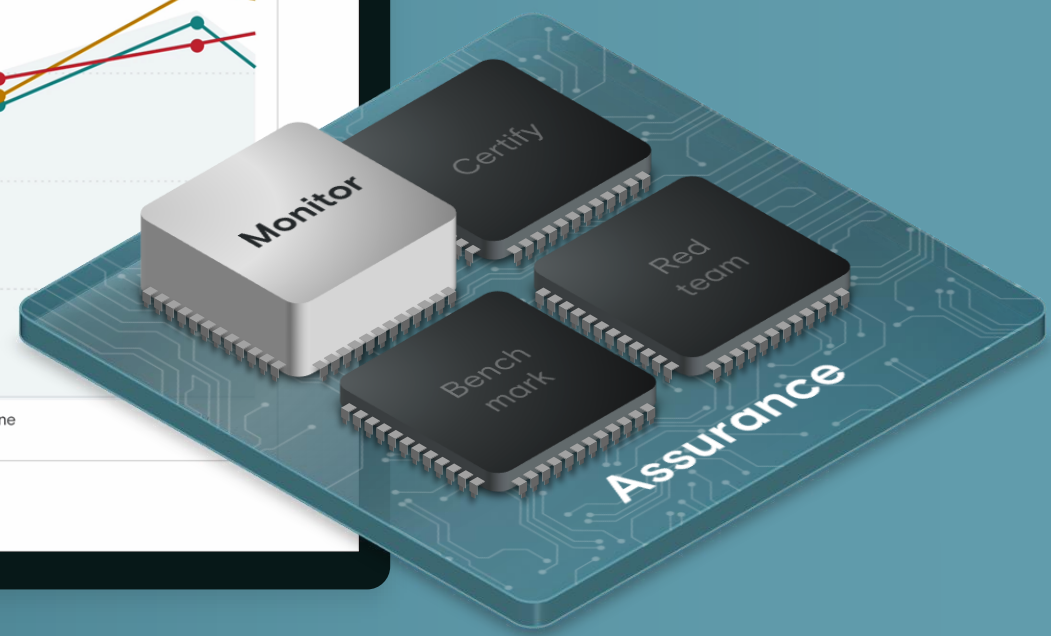
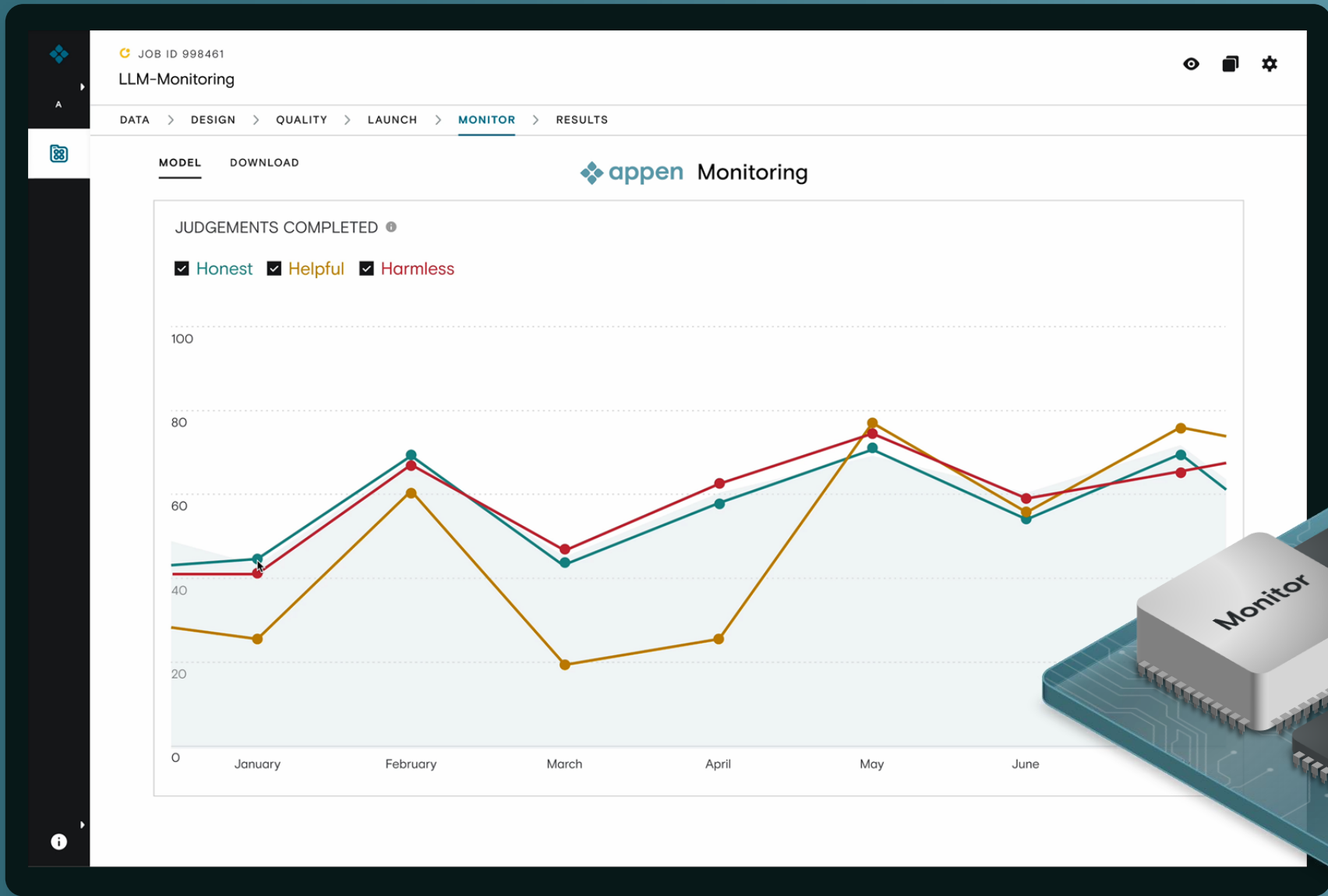
MODEL DOWNLOAD

appen Monitoring

JUDGEMENTS COMPLETED ⓘ

Honest Helpful Harmless











Projects

YOUR PROJECTS

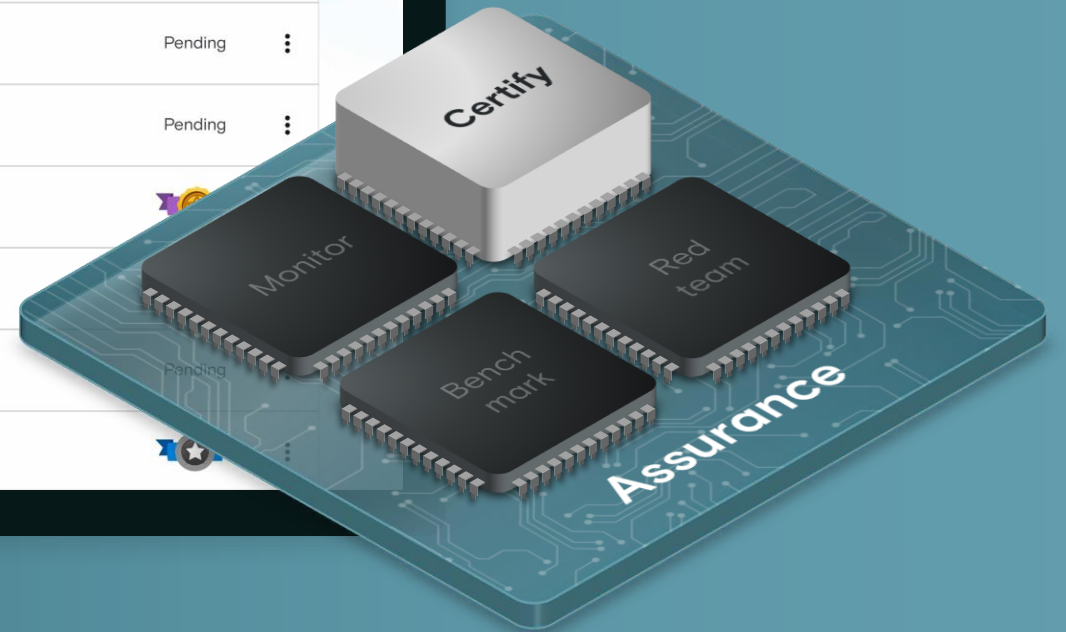
TEAM PROJECTS

PROJECT ID	PROJECT NAME	DATE CREATED	PROGRESS	IN QA	CERTIFICATION
4324	Site Chatbot Response Creation Prod 1	Dec 21, 2022	100%	4,532	 ⋮
5226	Credit Chatbot Red Teaming Round 1	Dec 21, 2022	100%	N/A	 ⋮
8765	Domain Search Dataset Q2	Nov 2, 2022	100%	7,753	 ⋮
1254	Credit Chatbot Response Ranking	Nov 14, 2022	N/A	N/A	Pending ⋮
8649	Chatbot Response Regression Test	Nov 14, 2022	<div style="width: 64%;"><div style="background-color: #008080;"></div></div> 64%	N/A	Pending ⋮
3797	Credit Chatbot Response Test 1	Oct 8, 2022	100%	N/A	 ⋮
3842	Response Alignment	Oct 1, 2022	100%	N/A	 ⋮
7364	Response Error Classification	Sept 27, 2022	<div style="width: 80%;"><div style="background-color: #008080;"></div></div> 80%	N/A	Pending ⋮
8374	Pairwise Response Relevance	Sept 25, 2022	100%	1,234	 ⋮

Projects

YOUR PROJECTS TEAM PROJECTS

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3797	Credit Chatbot Response Test 1	Oct 8, 2022	100%	N/A	⋮
3842	Response Alignment	Oct 1, 2022	100%	N/A	⋮
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8374	Pairwise Response Relevance	Sept 25, 2022	100%	1,234	⋮



Deep-learning AI



Data
collection



Data
annotation



Relevance

Generative AI



LLM
Fine tuning

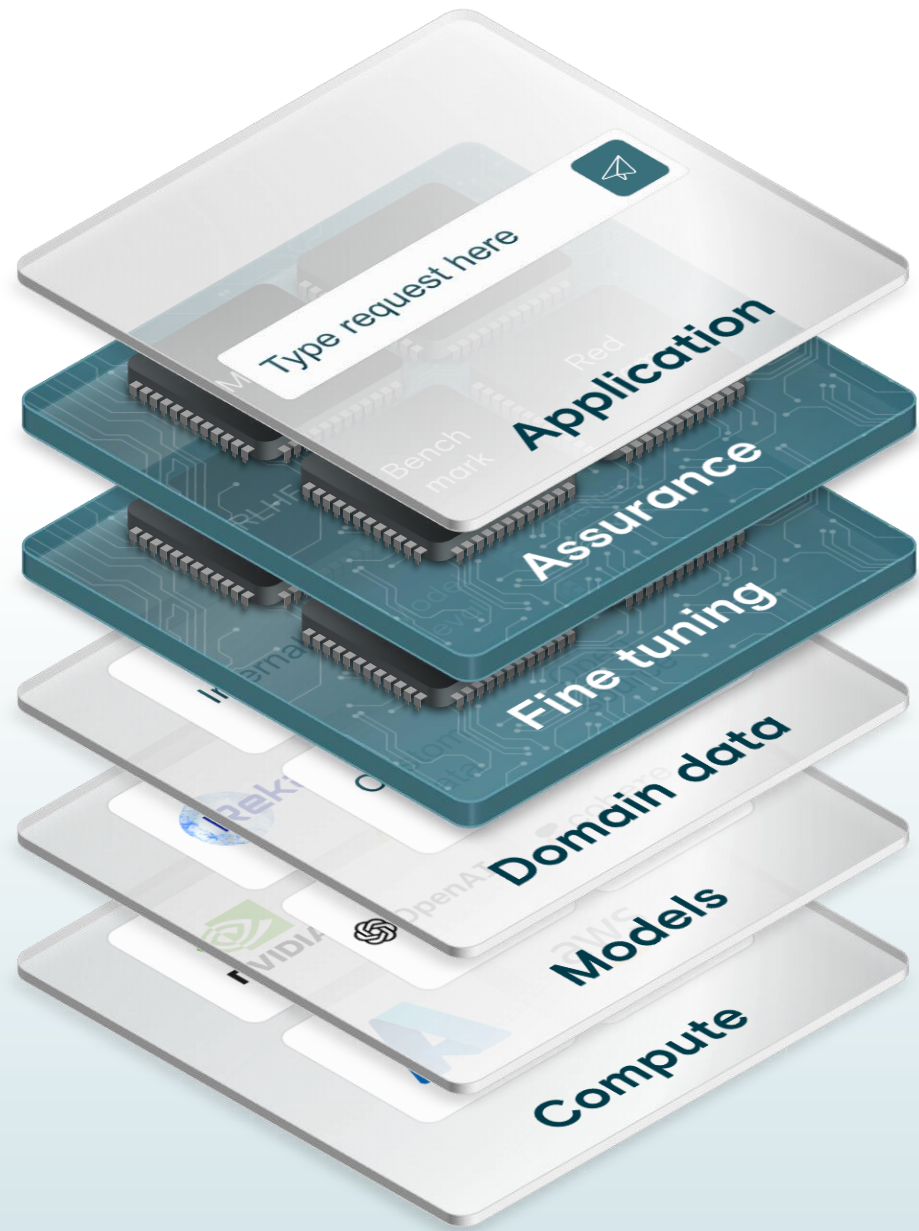


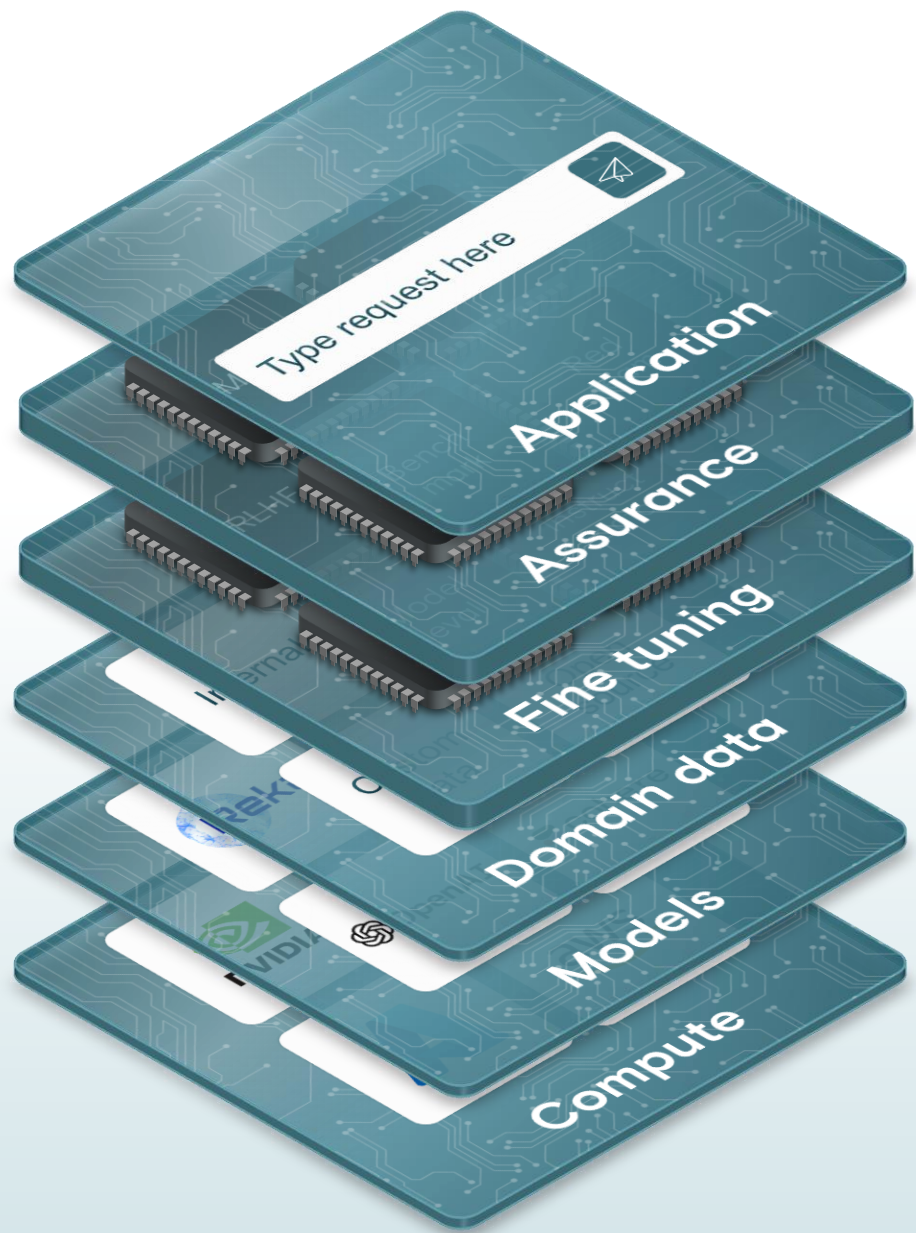
LLM
Assurance

ADAP

Appen Crowd







appen
COMPASS





Mike Davie

GM Quadrant

SAMSUNG

Data Sources

Data empowerment through trusted, high-quality insights.



Add new data source



Pinecone

Internal Database

AI-powered similarity search database



Opensearch

Internal Database

Real-time search and analytics engine for data exploration



CSV

Documents

Upload CSV Files



PDF

Documents

Upload PDF Files



Text

Documents

Upload TXT Files



AWS S3



Scalable cloud storage for data and file storage



Azure Cloud Storage

Internal Database

Cloud Data Storage



Dynamo DB

Internal Database

Fast and scalable NoSQL database service by AWS



0:19

Appen Datasets

Data empowerment through trusted, high-quality insights.

Call Centre Prompts Banking - NA English

30,000 common banking prompts for the North American market

Call Centre Prompts Banking - APAC Mandarin

40,000 common banking prompts for the Mandarin speaking markets

Anti-Toxicity

50,000 toxic prompts and respectful responses

Orion Global Location Patterns

3.5 billion daily signals, in 120 countries

Reality Check - Anti-Hallucination Location Data

Database of 3M POI across APAC

Math dataset

Prompt, explanation, and answer set for the domain of math word problems

General RLHF dataset

General prompt-response pairs for a range of use cases such as open Q&A, brainstorming, summarization

Finance chatbot-style dataset

Chatbot-style multi-turn prompt-response dataset for finance, accounting & tax

Legal Q&A dataset

Set of Q&A prompt-response pairs across different branches of law such as consumer law, family law, and employment law





DATA SOURCES

APPEN DATASETS

MODEL SELECTION

TUNING

Models

AI models designed to mimic human intelligence.

+ Add Model

Reka

AI model for image recognition and computer vision tasks

Nvidia NeMo

AI model framework for natural language processing applications

OpenAI

Integrate OpenAI by keying in API key and choose your model

Azure OpenAI

Link to Azure OpenAI

Cohere - Natural Language Processing

Models to improve human-machine interactions

Sagemaker

Connect to Sagemaker endpoints

Hugging Face

Access NLP models by keying in Hugging Face Key and repo id

Local Model

Integrate custom models from your machine (Llama, Vicuna, Alpaca etc)

Anthropic Claude

Link Anthropic Claude to your application

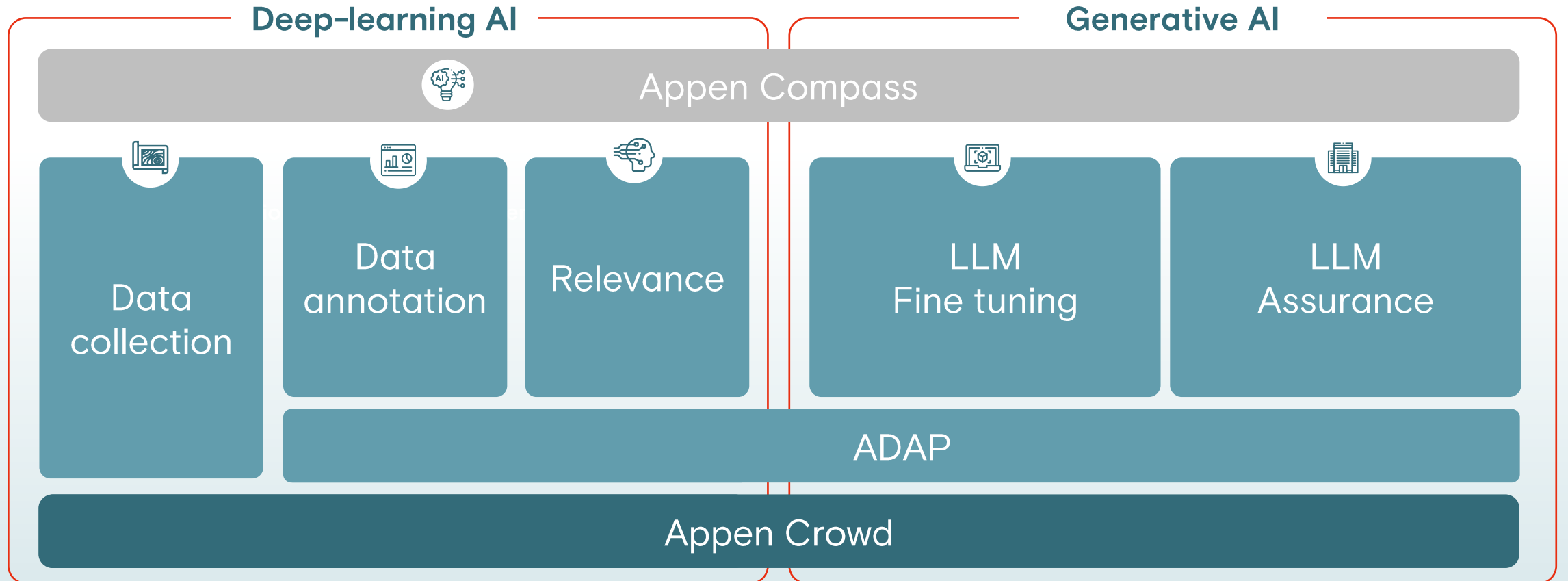


Andrew Ettinger

Chief Revenue Officer

Pivotal ASTRONOMER

Deep-learning + generative AI growth opportunity





**Right people in
the field**



**Playbooks and
GTM artifacts**



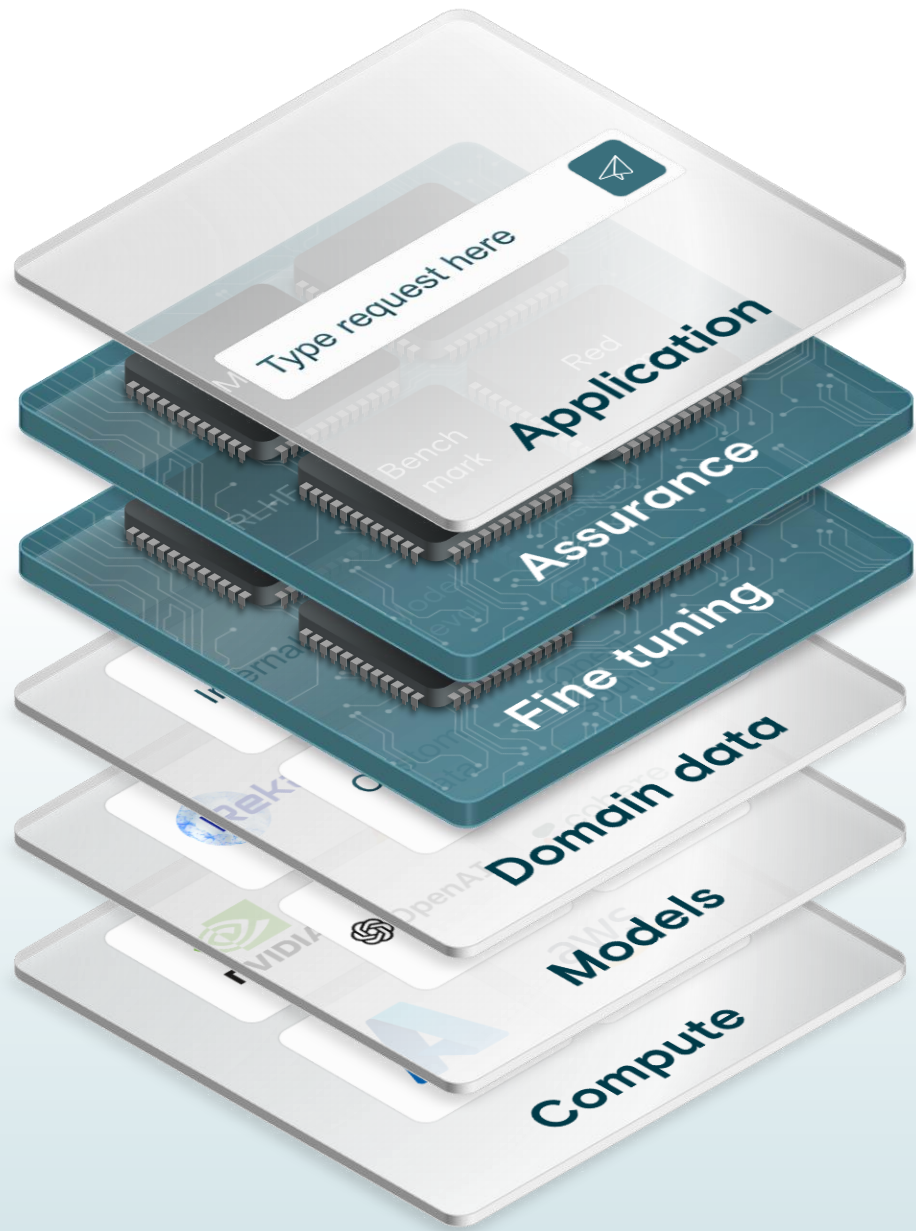
**Ecosystem
partnerships**



**Brand
awareness**



**Sales
rigour**



\$308b AI spend by 2026

20-30% spend on generative AI





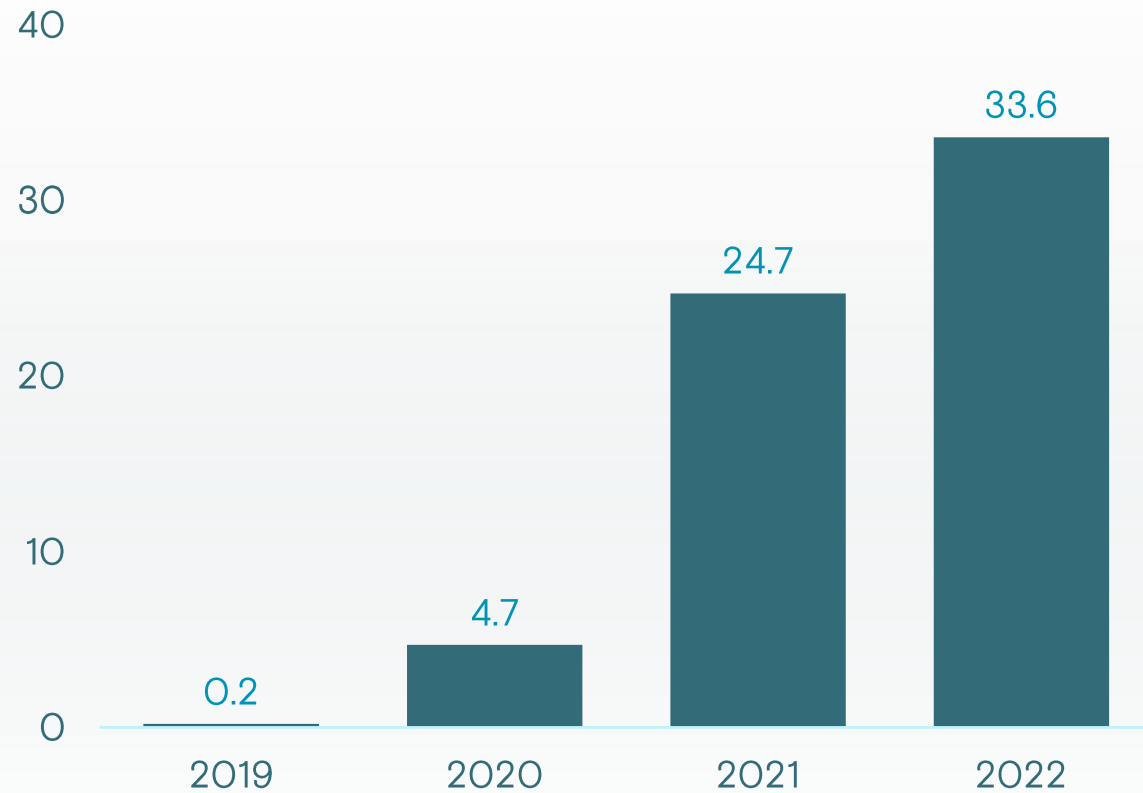
Roc Tian

Founder and GM Appen
China

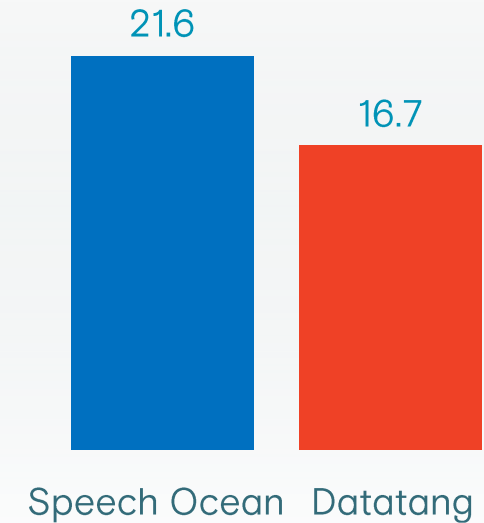


Appen China journey

Appen China Revenue (\$m)



Competitor domestic revenue (\$M)



Tier 1 customers

10 of 10

Largest
Chinese internet
companies

10 of 10

Largest
Chinese auto
companies

5 of 5

Largest
Chinese mobile
companies

Appen China facilities

Wuxi

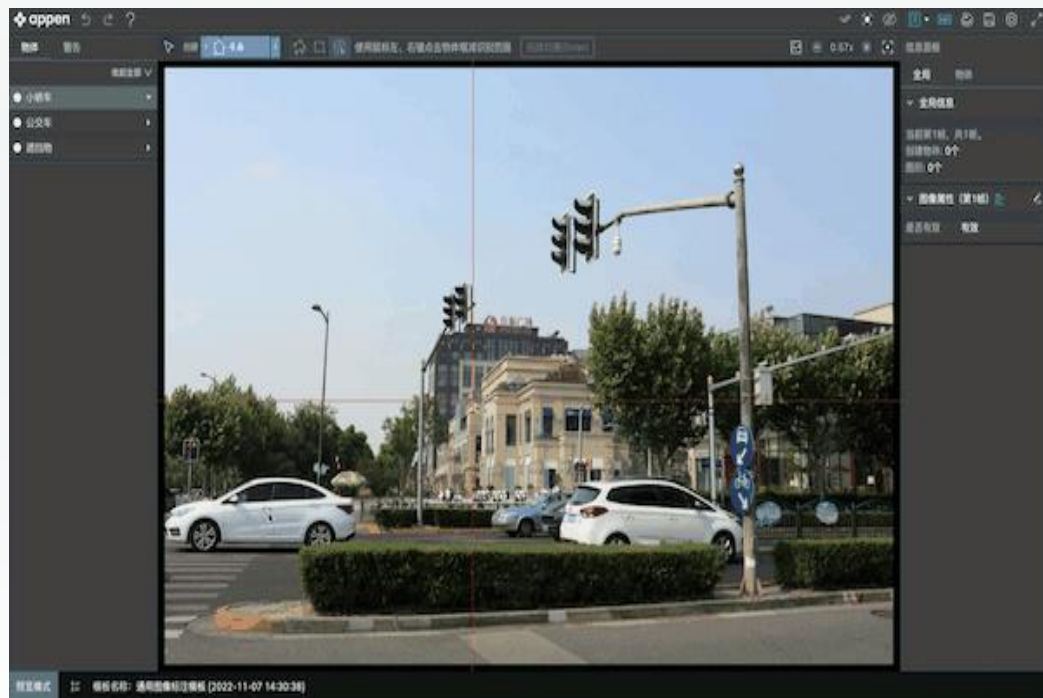
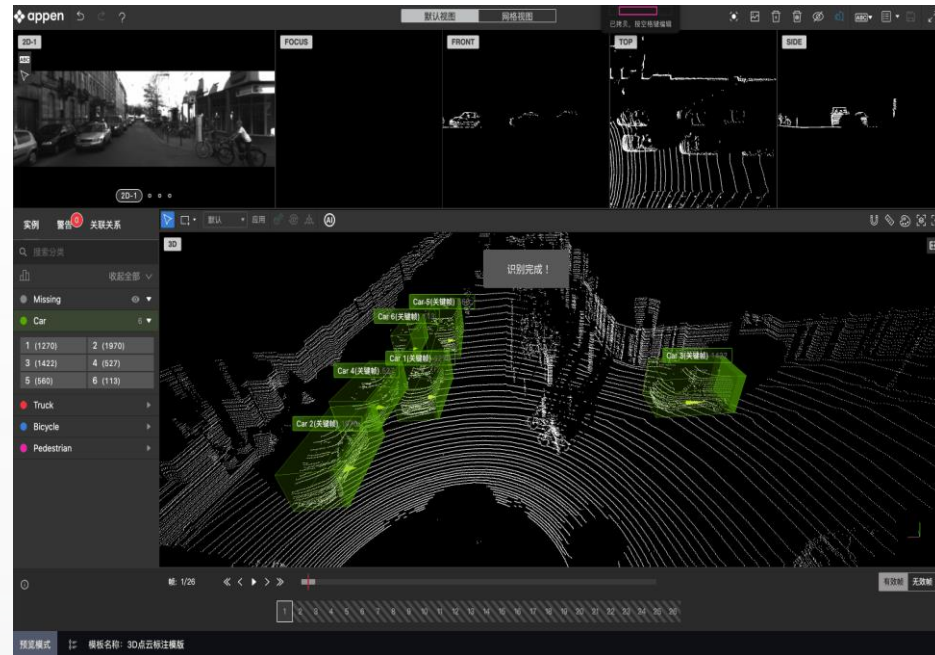


Dalian



Chongqing





Appen China growth strategy



**Expand within our
existing clients**



**New customer
growth**



Generative AI



#CultureCode

PURPOSE

We unlock the power of #Alforgood to build a better world.

PERSPECTIVE

We are a learn-it-all culture and embrace that comfort and growth do not coexist.

PROSPERITY

Four values unite us



Customer
obsessed



Courage to
innovate



Action
oriented



Winning
together





Armughan Ahmad
Chief Executive Officer



Sujatha Sagiraju
Chief Product Officer



Saty Bahadur
Chief Technology Officer



Mike Davie
Founder and GM Quadrant



Andrew Ettinger
Chief Revenue Officer



Roc Tian
GM China



Helen Johnson
Chief Financial Officer



Ryan Kolln
SVP, Strategy & Innovation

