

Transforming CX

Building Quality Experiences with AI

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About Liberty IT

We're the driver behind #86 Fortune-ranked company, Liberty Mutual Insurance's global digital enablement journey, reimagining insurance for our customers at the time when they need us most.

29
countries and
economies

more than
50,000
global employees

\$50 billion
annual consolidated
revenue

5th
largest global
P&C insurer





Customer



Telephony | IVR



SMS | Messaging



Online | Webchat

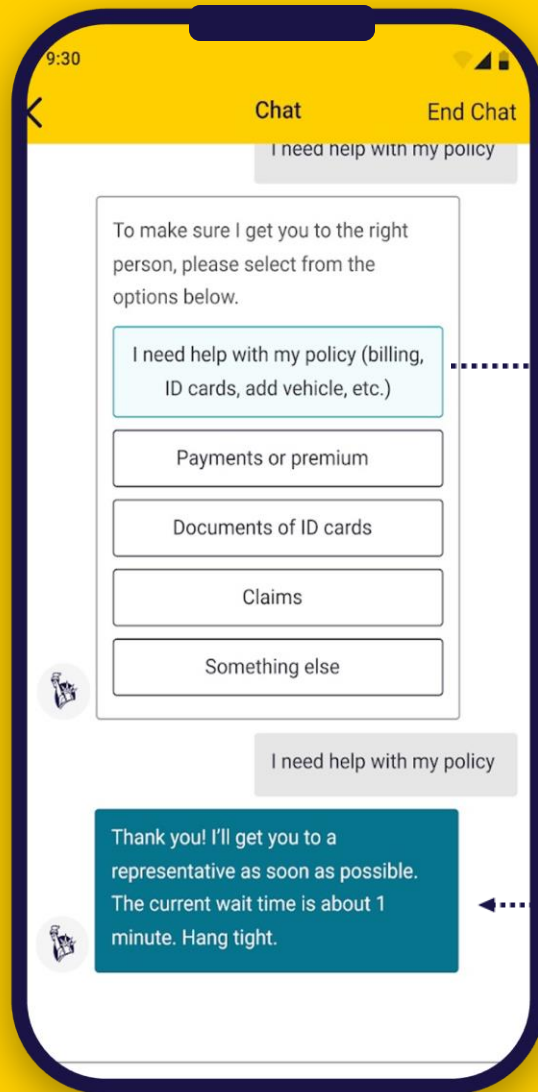


Native | Mobile App



Email | Digital Comms





1 Request

2 Response

Claims help and resources

How to file and track your claim

Q: How do I file a claim online?

A: We understand that this may be a stressful time for you. That's why we've worked to make online filing as fast and frictionless as possible.

Click on the link below to get started. From there, we'll guide you the process one step at a time so that nothing is missed along the way.

[Update your info](#)

Q: How do I track my claim online?

A: Once you've filed your claim, you can track its progress via the Liberty Mutual eService portal. Do you have an open claim?

[Manage your claim](#)

Why you should file online

Glass repair claims

Claims for Non-Liberty Mutual customers

Claims Payments



Virtual Assistant Helping During Hurricanes

Liberty IT can be proud of the way our technology performed during our customers time of need.

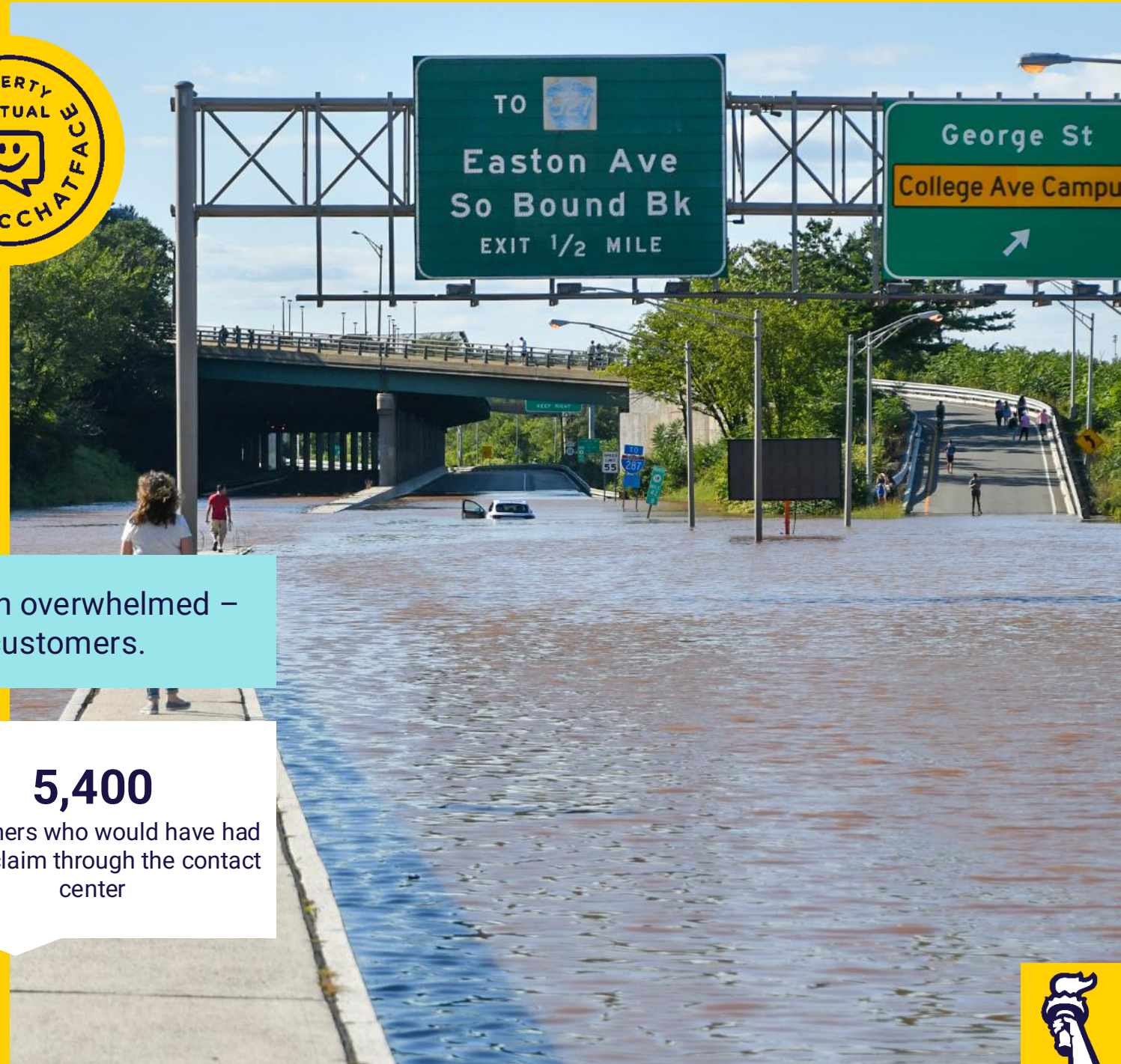


During Hurricanes, call centers are often overwhelmed – meaning long waiting times for customers.

2,450
claims filed

2,940
claims filed online
after an SMS offer

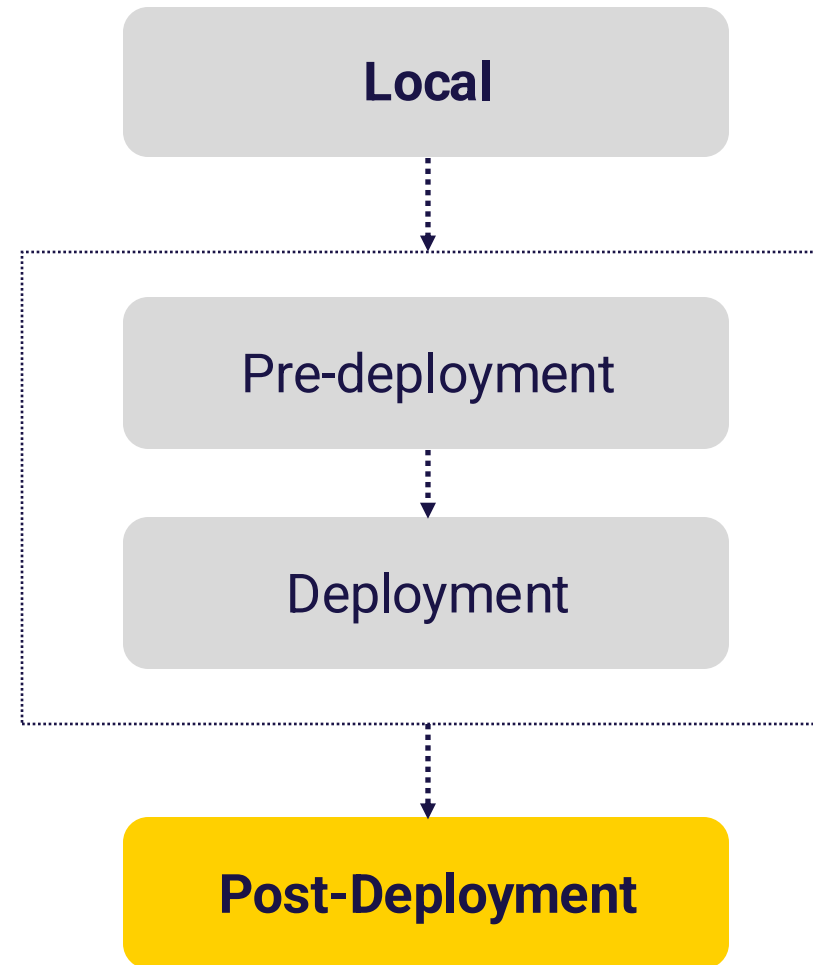
5,400
customers who would have had
to file claim through the contact
center



Pipeline

Continuous Integration / Delivery (CI/CD) Pipeline:

- **Managed AI service**
- **Post-deployment validation**



Behaviour Driven Development

Validate executable specifications against our deployed experiences:

- **Intent Recognition**
- **End-to-end Conversational Flow**
- **CI/CD Pipeline Integration**
- **Report Generation**

Feature: Transfer Intent Smoke Test

Scenario: Anonymous requests a call back

Given the user is "Anonymous"

And the user begins a new chat with "Bot"

* **User:** I would like a representative to call me back.

* **Bot:** Sure. Can we use the telephone number on file?

Then `lex.sessionState.intent.name = "TransferIntent"`

And `lex.sessionState.dialogAction.type = "ElicitSlot"`

And `lex.sessionState.dialogAction.slotToElicit = "Method"`

* **User:** Yes, please.

* **Bot:** Thank you. An agent will be with you soon.

Then `lex.sessionState.intent.name = "TransferIntent"`

And `lex.sessionState.dialogAction.type = "Close"`

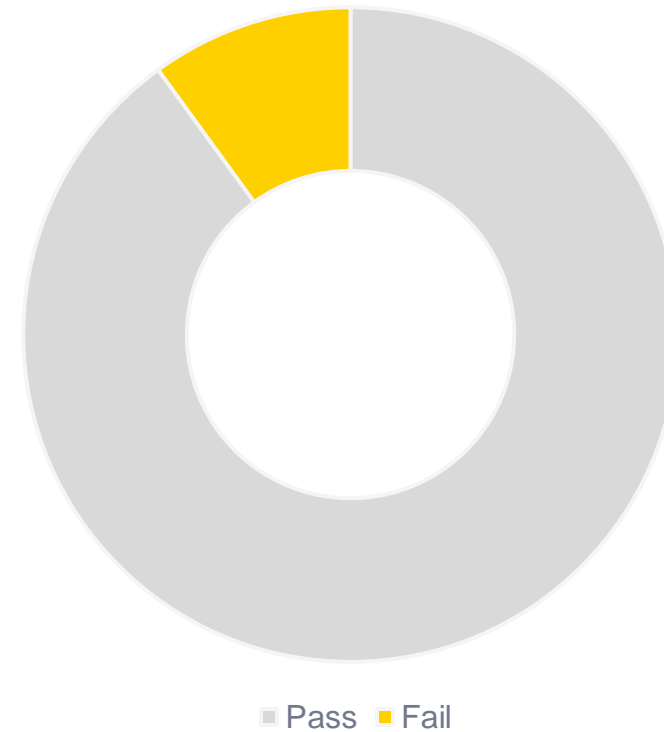


Behaviour Driven Development

Validate executable specifications against our deployed experiences:

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Report

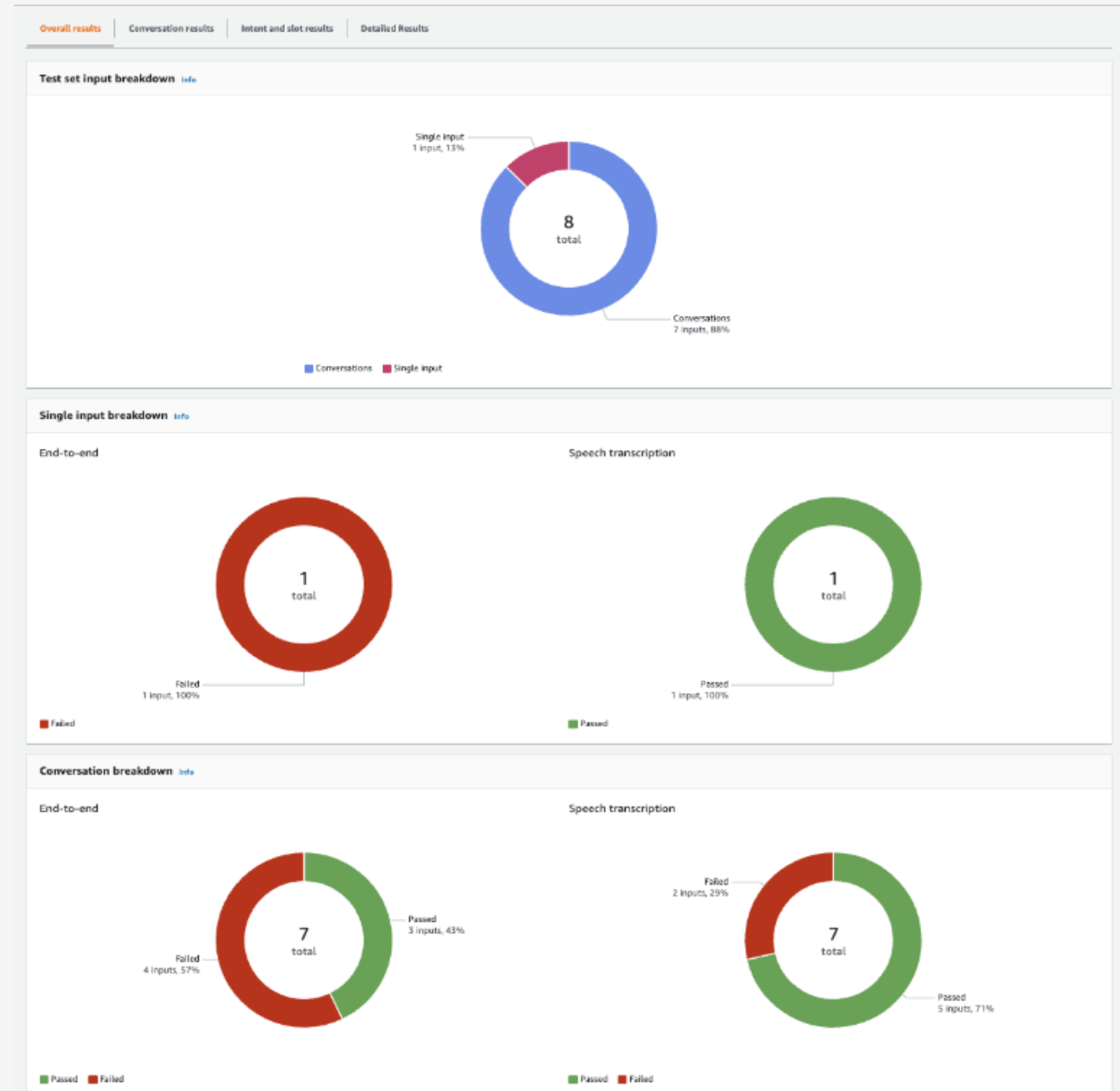


Amazon Lex Test Workbench

You can test bots to **evaluate performance** before deployment, and view test result breakdowns at scale.

Amazon Web Services

<https://docs.aws.amazon.com/lexv2/latest/dg/test-workbench.html>

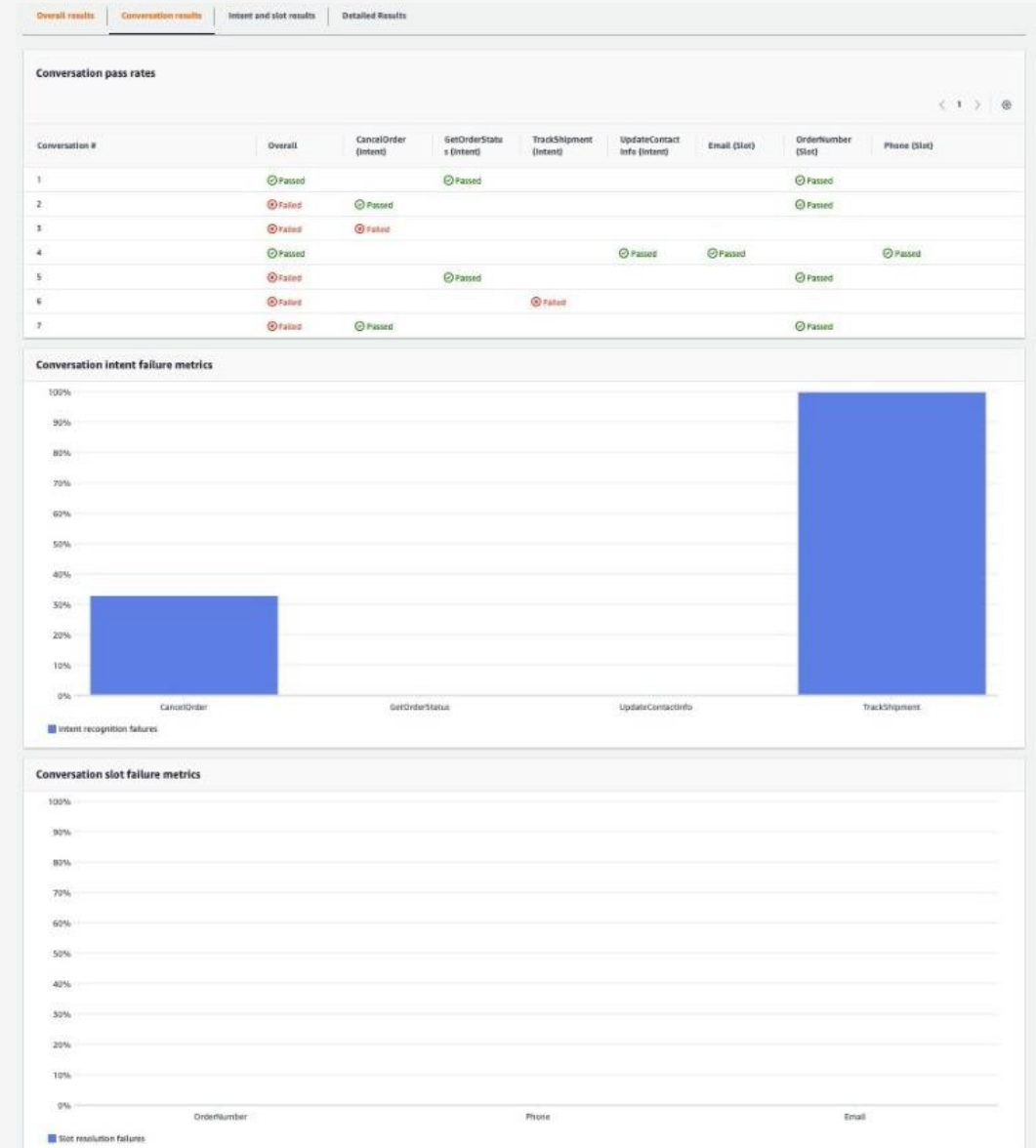


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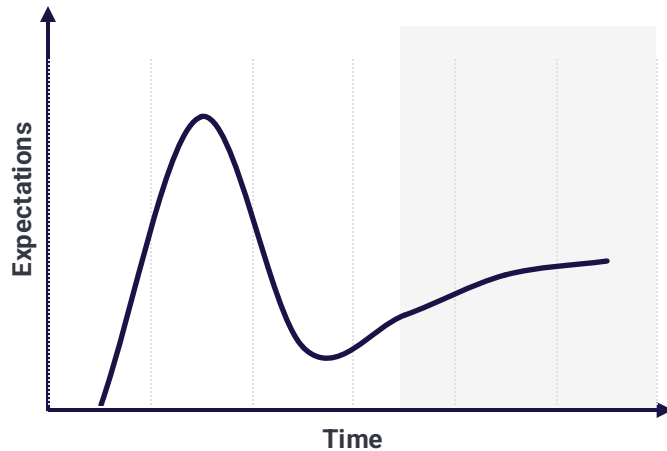
2ZGYIV11P5

Test details			
Completed on 28 days ago	Status ✔ Complete	Tested bot cogl-genai-challenge-n1642264	Endpoint NonStreaming
Test type Text	Test set cogl-genai-challenge-test-set	Tested alias cogl-genai-challenge-n1642264-alias	Language English (US)

▼ Intents used (20) Info		< 1 2 > ⚙	
Intent ▲	Slots	▼	
ClaimCreateIntent	AnimalType, LossCause, PolicyNumber, PropertyContents, PropertyPart, PropertyRoom, PropertyType, RelativePosition, RoadUser, StationaryObject, VehiclePart, VehicleType, WeatherCondition		
ClaimStatusIntent	ClaimNumber, FamilyMember, FirstName, PolicyNumber		
FallbackIntent	-		
GetRoadsideAssistanceIntent	RelativePosition, StreetName1, StreetName2, VehiclePart, VehicleType		
HelpIntent	-		
PaymentCancelIntent	-		
PaymentCheckStatusIntent	PaymentAmount		
PaymentMakePaymentIntent	FamilyMember, PaymentAmount, PaymentMethod		
PaymentQueryPremiumRateIntent	PaymentAmount, PercentageAmount		
PaymentUpdateDetailsIntent	-		



Hype Cycle



Gartner Research

<https://www.gartner.com/en/documents/5505695>

Gartner Research

Hype Cycle for Artificial Intelligence, 2024

Published: 17 June 2024

Summary

Investment in AI has reached a new high with a focus on generative AI, which, in most cases, has yet to deliver its anticipated business value. This research helps AI leaders identify other techniques worthy of investment by profiling a wide range of AI innovations, many of which are advancing fast.

Included in Full Research

Analysis

Appendixes

Gartner Recommended Reading

What You Need To Know



Overview

“Generative AI (GenAI) has **passed the Peak of Inflated Expectations**, although hype about it continues. In 2024, more value will derive from projects based on other AI techniques, either stand-alone or in combination with GenAI, that have standardized processes to aid implementation.”

Gartner Research

<https://www.gartner.com/en/documents/5505695>

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Key Takeaway

“To deliver maximum benefit, AI leaders should base future system architectures on **composite AI techniques** by combining approaches from innovations at all stages of the Hype Cycle.”

Gartner Research

<https://www.gartner.com/en/documents/5505695>

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Use Case

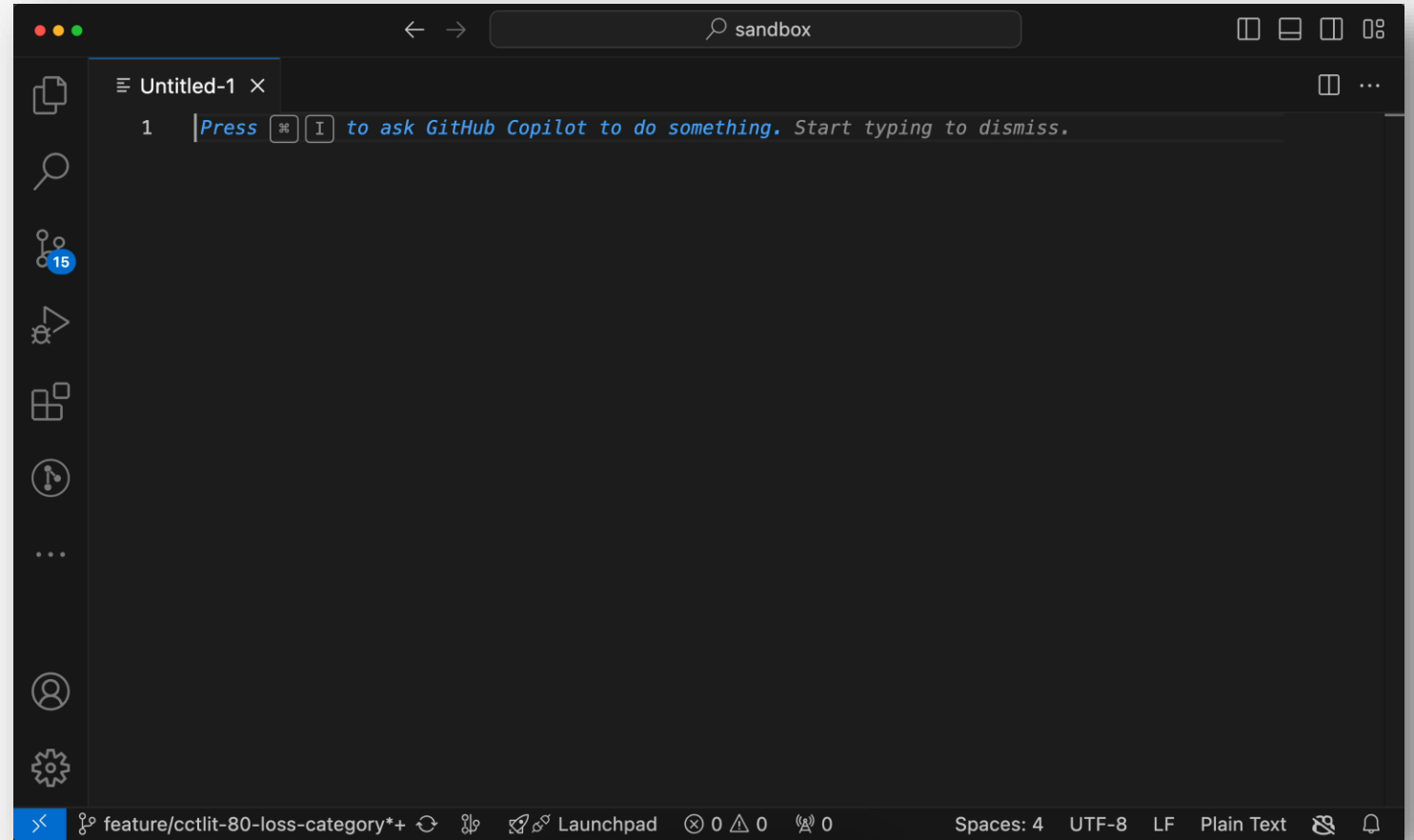
Apply Generative AI to accelerate test set **generation, annotation** and **validation**.

#	Utterance	Intent Name
1	I need help to file a claim .	CreateClaim
2	What documents do I need to provide for a claim?	ClaimDocuments
3	How can I add a new driver to my policy?	AddDriver
4	Can you help me update my contact information ?	UpdateContactInfo
5	Where do I go to update my coverages ?	UpdateCoverage
...



Prompt

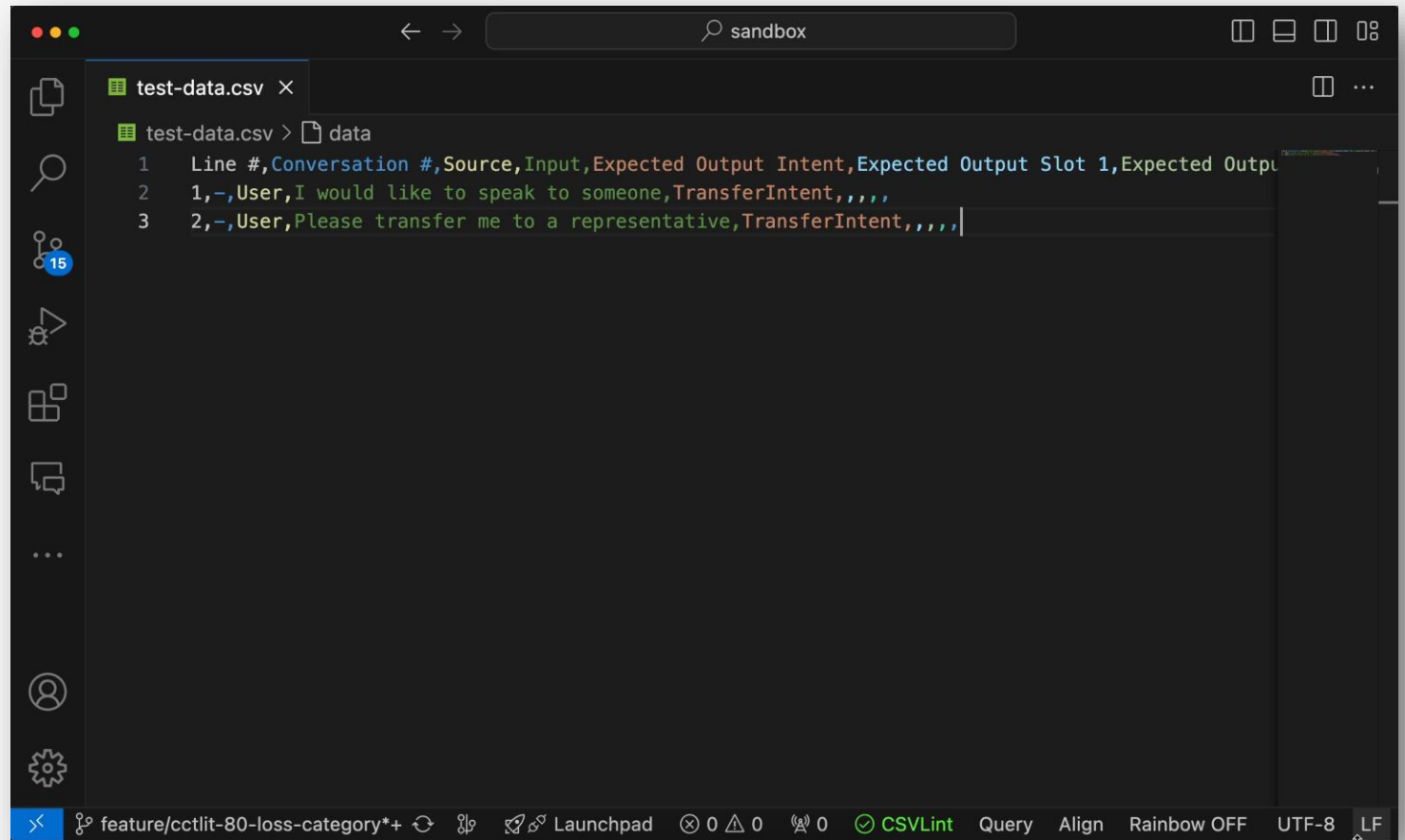
“Provide **100 utterances** you may say when speaking to an insurance chatbot.”



Prompt

“You are a **Liberty Mutual insurance customer**. You started to open a **claim online** and would now like to **speak** to an insurance professional.

Provide **100 different utterances** you may say when speaking to a **telephony chatbot**.”



```
test-data.csv > data
1 Line #,Conversation #,Source,Input,Expected Output Intent,Expected Output Slot 1,Expected Output Slot 2
2 1,-,User,I would like to speak to someone,TransferIntent,,,,
3 2,-,User,Please transfer me to a representative,TransferIntent,,,,,
```

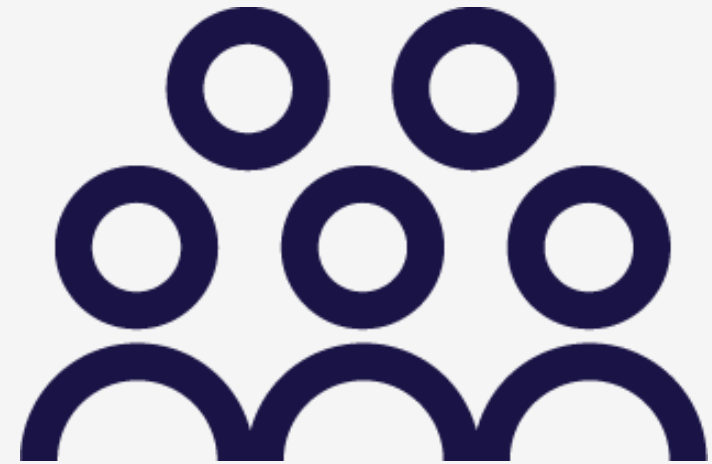


Customer Personas

You are a **Liberty Mutual insurance customer**:

- You started to open a **claim online** and would now like to **speak** to an insurance professional.
- You are having **difficulty hearing** and need the last response repeated.

Provide **100 different utterances** you may say when speaking to a **telephony** chatbot.



GenAI Challenge

“An unseen **test dataset** will be **generated** using ChatGPT. The dataset will be in a CSV format supported by the Amazon Lex Test Workbench.

At the end of the challenge, the **unseen test set** will be run against each successfully deployed chatbot.”



Model Settings

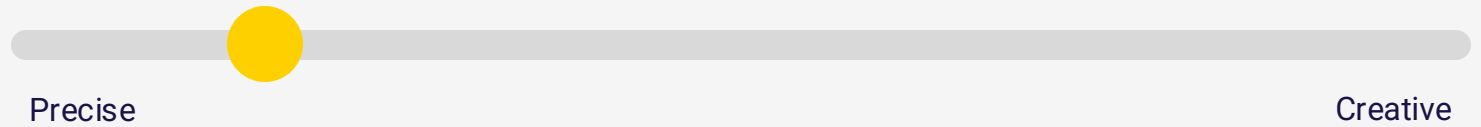
Fine-tuning lets you get more out of the models available through the API by providing:

- **Higher quality** results than prompting alone
- **Token savings** due to shorter prompts

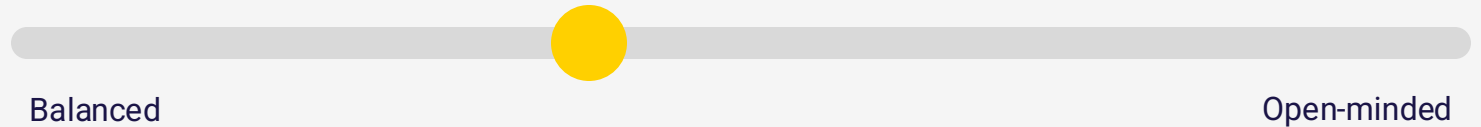
OpenAI

<https://platform.openai.com/docs/guides/fine-tuning>

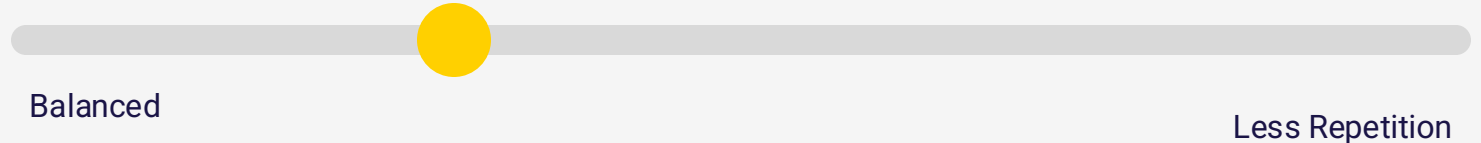
Temperature



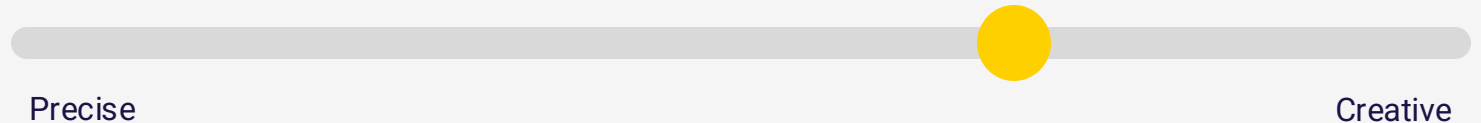
Presence Penalty



Frequency Penalty



Top-P (Nucleus Sampling)



Generation

- Populate relevant intents and slot types with **natural language**.
- Automatically **generate** sample utterances
- Improve slot **resolution** performance.

Amazon Lex

<https://docs.aws.amazon.com/lexv2/latest/dg/generative-features.html>

⚡ Descriptive Bot Builder - GenAI [Info](#)

You must have Amazon Bedrock set up in order to use this feature. Please ensure you have requested access to Anthropic's V2 model.

Create a description of the bot you like to build. For example "We want a bot to help customers order food (using item id, quantity, size), check order status, and cancel an order. Use Order ID for indexing order."

Describe your use case

We want a bot to help customers order food (using item id, quantity, size), check order status, and cancel an order. Use Order ID for indexing orders.

Minimum characters: 100, Maximum characters: 2000

Select model



Anthropic ▼

Claude V2 ▼



Additional charges may be incurred based on the usage of generative AI features

[Learn more](#)



Omnichannel | Customer Interactions

1 Login



2 Start Quote



3 Completion



GenAI Model Deployment

- **Managed Service**
- **Foundation Model (FM) Selection**
- **Responsible AI**

AWS

<https://aws.amazon.com/bedrock/>

Machine Learning

Amazon Bedrock

The easiest way to build and scale generative AI applications with foundation models (FMs)

Overview

Amazon Bedrock is a fully managed service that makes FMs from leading AI startups and Amazon available via an API, so you can choose from a wide range of FMs to find the model that is best suited for your use case. With Bedrock's serverless experience, you can get started quickly, privately customize FMs with your own data, and easily integrate and deploy them into your applications using the AWS tools without having to manage any infrastructure.

Benefits

Accelerate development of generative AI applications using FMs through an API, without managing infrastructure.

Choose FMs from AI21 Labs, Anthropic, Stability AI, and Amazon to find the right FM for your use case.

Use AWS tools and capabilities that you are familiar with to deploy scalable, reliable, and secure generative AI applications.

Get started with key use cases quickly



GenAI Model Deployment

Use Case:

- **Bot:** "When did the accident happen?"
- **User:** "It might have occurred three days ago."

AWS

<https://aws.amazon.com/bedrock/>

Amazon Bedrock > Base models

Base models Info Purchase Provisioned Throughput Open in playground ⋮ 🔍

With Amazon Bedrock, you can build and scale generative AI applications using foundation models from Amazon and leading AI startups.

Group by model family ▾ 🏠 ☰

▼ **Claude** | by Anthropic (5)

Claude 3 is Anthropic's family of state-of-the-art vision and text AI models. The three models in the family—Haiku, Sonnet, and Opus—allow customers to choose the exact combination of intelligence, speed, and cost that suits their business needs.

[View provider details](#)

Claude v2.1 ○

Anthropic | Text Model | Max 200k

Description

An update to Claude 2 that features double the context window, plus improvements across reliability, hallucination rates, and evidence-based accuracy in long document and...

Model attributes

Text generation, Conversation, Complex reasoning & analysis

Claude v2 ○

Anthropic | Text Model | Max 100k

Description

Anthropic's highly capable model across a wide range of tasks from sophisticated dialogue and creative content generation to detailed instruction following.

Model attributes

Text generation, Conversation, Complex reasoning & analysis

Claude 3 Haiku v1 ○

Anthropic | Text & Vision Model | Max 200k

Description

Claude 3 Haiku is Anthropic's fastest, most compact model for near-instant responsiveness. It answers simple queries and requests with speed. Customers will be able to build...

Model attributes

Image to text, conversation, chat optimized

Claude 3 Sonnet v1 ○

Anthropic | Text & Vision Model | Max 200k

Description

Claude 3 Sonnet by Anthropic strikes the ideal balance between intelligence and speed—particularly for enterprise workloads. It offers maximum utility at a lower price than...

Model attributes

Image to text & code, multilingual conversation, complex reasoning & analysis

Claude Instant v1.2 ○



GenAI Model Deployment

Leverage Foundation Model (FM) to search and summarise FAQ knowledge:

- **Knowledge Base**
- **Intelligent Search**
- **Composite AI Models**

AWS

<https://aws.amazon.com/bedrock/>

Lex > Bots > Bot: cct-ent-ex... > Versions > Version: Draft > All languages > Language: English (US) > Intents

Draft version ▾ English (US) ▾ Successfully built ⓘ English (US) has not built changes. Build Test

Intents (27) Info Delete Add intent ▾

An intent represents an action that the user wants to perform.

🔍 Search Intents < 1 2 3 > ⚙️

	Name ▾	Description	Last edited ▾
<input type="radio"/>	GetClaimStatusIntent	Get the status of a Claim	11 days ago
<input type="radio"/>	FallbackIntent	Default intent when no other intent matches.	11 days ago
<input type="radio"/>	AutoLossCause	classify the cause of the loss while filing auto claim	11 days ago
<input type="radio"/>	RemoveVehicleIntent	Remove a vehicle from an insurance policy.	29 days ago
<input type="radio"/>	CancelPolicyIntent	Cancel an insurance policy.	29 days ago
<input type="radio"/>	GetDiscountDetailsIntent	Get details on insurance policy discount.	29 days ago
<input type="radio"/>	GetDocumentsIntent	Get policy documents.	29 days ago
<input type="radio"/>	RequestTransferIntent	Request to transfer to a real person.	29 days ago
<input type="radio"/>	HelpIntent	Responds to words or phrases that indicate the user needs help while interacting with your bot.	29 days ago
<input type="radio"/>	ResetPasswordIntent	User needs to reset their account password	29 days ago



GenAI Model Considerations

- **Scale:** On-demand vs Provisioned Throughput
- **Availability:**
 - Region Selection
 - Model Lifecycle

AWS

<https://aws.amazon.com/bedrock/>

Amazon Bedrock > Base models

Base models Info Purchase Provisioned Throughput Open in playground ⋮ 🔍

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