



METRO & BUS TICKET BOOKING CHATBOT

Built using IBM Watson Assistant on IBM Cloud.
Developed to check fares, book tickets, view schedules, and cancel bookings via chatbot.

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Class - MBA

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CONTENT



- Project Overview
- Features of the Bot
- Technologies Used
- Intents
- Entities
- Dialog Flow (Booking Flow)
- Fare Node Dialog Logic
- Conflict Resolution
- Sample Conversation
- Benefits & Future Scope

INTRODUCTION TO IBM WATSON ASSISTANT



- IBM Watson Assistant is a cloud-based AI service that helps create AI-powered chatbots and virtual agents.
- It uses Natural Language Understanding to interpret user queries and provide intelligent responses.
- Supports integrations with websites, mobile apps, messaging apps, and backend systems.

Features:

- Easy-to-use drag-and-drop interface
- Pre-built content and starter kits
- Multilingual support
- Analytics and feedback integration



Use Case: METRO & BUS TICKET BOOKING CHATBOT

Target Users: Daily commuters, travelers, and public transport users

Functionalities:

- Ticket Booking (Metro or Bus)
- Fare Information
- Travel Schedule Inquiry
- Ticket Cancellation
- Confirmation & Summary of Bookings

Design Principle:

Use minimal intents and maximum entity-based conversation to streamline travel planning and improve commuter convenience. Focus on simplicity, utility, and ease of access through a chatbot interface powered by IBM Watson Assistant.



PROJECT OVERVIEW

Goal

Develop a chatbot for booking tickets using IBM Watson Assistant.

Platform

Hosted on IBM Cloud for scalability and reliability.

Use Case

Check fares, book tickets, view schedules, cancel bookings.





IBM watsonx Assistant Lite Upgrade | CityRide Assist... ▾

Learning resources ?

Preview assistant

Copy link to share Change layout Change background + Customize web chat

Sample website

CityRide Assistant

Hi! I'm a virtual assistant.
How can I help you today?

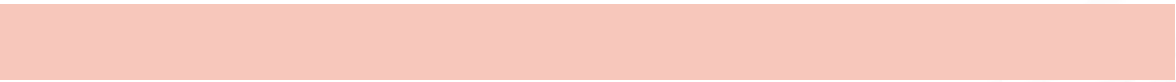
Example: Find nearby location

Example: Check account balance

Example: See how I can help

Type something...

Built with IBM watsonx ⓘ





KEY FEATURES

- Ticket Booking
- Fare Information
- Schedule Details
- Cancel Tickets



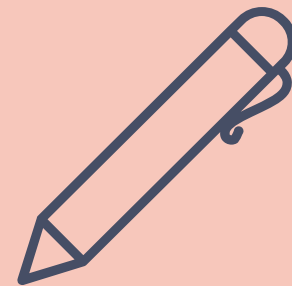
TECHNOLOGIES USED



IBM Watson Assistant
Core chatbot engine.



IBM Cloud
Hosting and deployment
environment.




NLP
Natural Language Processing.





Intents OVERVIEW

Node Name	Condition Used	Type
Welcome	#greeting	Intent
Book Ticket	#book_ticket	Intent
Metro Booking Path	@transport_type:metro	Entity
Bus Booking Path	@transport_type:bus	Entity
Confirm Booking	#confirm	Intent
Cancel Ticket	#cancel_ticket	Intent
Fare Info	#fare_info	Intent
Schedule Info	#schedule_info	Intent
Fallback	true	Catch-all



IBM watsonx Assistant Lite

Upgrade

CityRide Assist... ▾

Learning resources ?

Dialog

Intents

Entities

My Entities

System Entities

Dialog

Options

Webhooks

Disambiguation

Autocorrection

Algorithm Version

Upload / Download

Content Catalog

Intents (8) ↑

Description

Modified ↑↓

Examples ↑↓

☐ #book_ticket

book ticket

3 days ago

4

☐ #cancel_ticket

ticket cancellation

3 days ago

4

☐ #Confirm

Ticket confirmation

3 days ago

2

☐ #fare_info

fare information

3 days ago

2

☐ #find_route

route finder

3 days ago

3

☐ #goodbye

good bye to customer

3 days ago

4

☐ #greeting

greetings to customer

3 days ago

7

☐ #schedule_info

Schedule of Metro and Bus

3 days ago

2

Showing 1–8 of 8 intents

1 ▾ 1 of 1 pages

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Create intent +





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Dialog

Intents

Entities ^

My Entities

System Entities

Dialog

Options ^

Webhooks

Disambiguation

Autocorrection

Algorithm Version

Upload / Download

Content Catalog

🔍

Try it

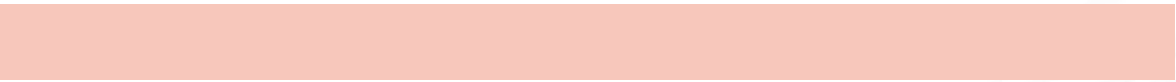
⬆️ ⬇️ 🗑️

Create entity +

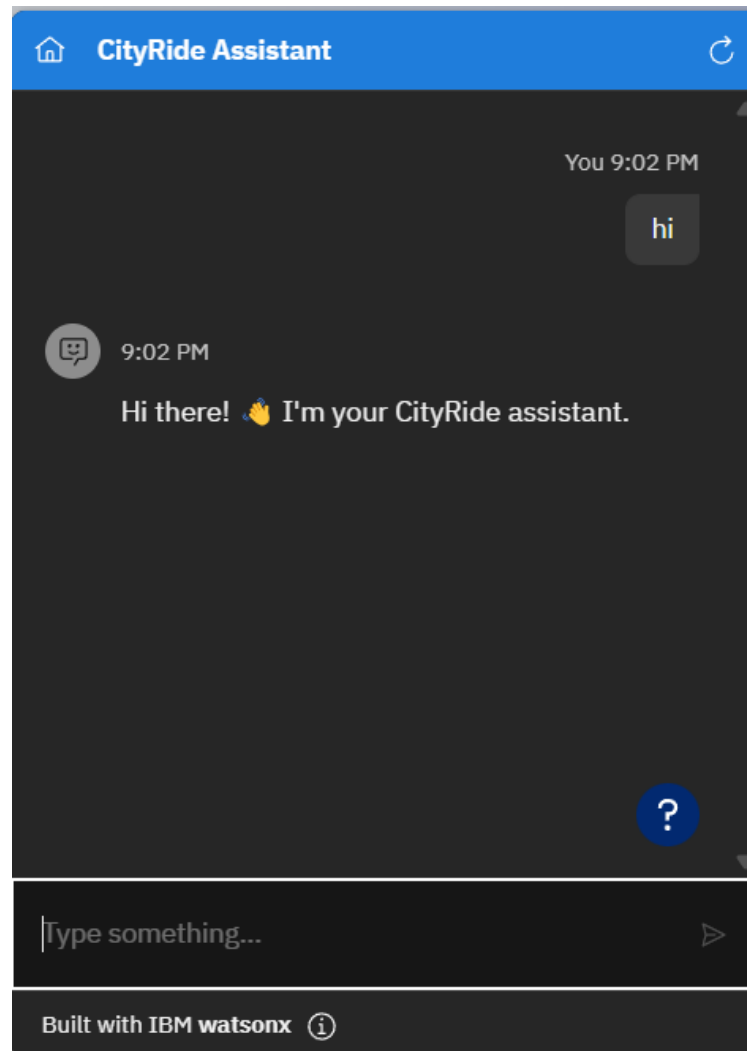
<input type="checkbox"/>	Entity (6) ↑	Values	Modified ↑↓
<input type="checkbox"/>	@destination_station	destination station	a day ago
<input type="checkbox"/>	@fare_zone	zone 2, zone 1, 50, 40	a day ago
<input type="checkbox"/>	@route	borivali-dadar, cst-panvel, andheri-bandra,thane-panvel	a day ago
<input type="checkbox"/>	@station	Noida Sector 18, Rajiv Chowk, Central Secretariat, Raja Nahar Singh	3 days ago
<input type="checkbox"/>	@transport_type	evening, metro, bus, time, 9 AM, now, tomorrow	3 days ago
<input type="checkbox"/>	@travel_time	travel time	a day ago

Showing 1–6 of 6 entities

1 of 1 pages ◀ ▶



DIALOG FLOW (Booking)



User Initiates

Triggers #book_ticket intent

Bot Collects Info

Mode, stations, date/time

Confirmation

Bot confirms details with user

Booking

Booking confirmed after user says
"Yes"

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Dialog

Intents

Add nodeAdd child nodeAdd folder

Entities

My EntitiesSystem Entities

Dialog

Options

WebhooksDisambiguationAutocorrectionAlgorithm VersionUpload / Download

Content Catalog

Welcome

#greeting

1 Responses / 0 Context Set / Does not return

Book Ticket

#book_ticket

1 Responses / 3 Context Set / 4 Slots / Does not return

Confirm Booking

#Confirm

1 Responses / 0 Context Set / Does not return

Cancel Booking

#cancel_ticket

1 Responses / 0 Context Set / Does not return

Fare Info

#fare_info

IBM watsonx Assistant LiteUpgradeCityRide Assist... ▾

Dialog

Intents

Add nodeAdd child nodeAdd folder

Entities

My EntitiesSystem Entities

Dialog

Options

WebhooksDisambiguationAutocorrectionAlgorithm VersionUpload / Download

Content Catalog

Cancel Booking

#cancel_ticket

1 Responses / 0 Context Set / Does not return

Fare Info

#fare_info

1 Responses / 4 Context Set / 4 Slots / Does not return

Schedule Info

#schedule_info

1 Responses / 0 Context Set / Does not return

Bye

#goodbye

1 Responses / 0 Context Set / Does not return

Anything Else

anything_else

1 Responses / 0 Context Set / Does not return



Book Ticket

Customize



If assistant recognizes

#book_ticket



Then check for

Manage handlers

	Check for	Save it as	If not present, ask	Type		
1	@transport_type	\$transport_type	Metro or Bus?	Required		
2	@station	\$station	From which station?	Required		
3	@destination_station	\$station	To which station?	Required		
4	@sys-time	\$sys-time	What time would you like to travel?	Required		

Cancel Booking

Customize



If assistant recognizes

#cancel_ticket



Assistant responds



Text



Please provide your booking details. I'll help you cancel it.



Enter response variation



Response variations are set to **sequential**. Set to [random](#) | [multiline](#)

[Learn more](#)

Add response type +

Then assistant should

Choose whether you want your Assistant to continue, or wait for the customer to respond.

Wait for reply



SAMPLE CONVERSATION

Test Conversation

User: Hi

Bot: Hello! How can I assist you today?

User: I want to book a ticket

Bot: Great! Would you like to travel by Metro or Bus?

User: Metro

Bot: From which station would you like to start your journey?

User: Andheri

Bot: And your destination station?


User: Bandra

Bot: When do you plan to travel?

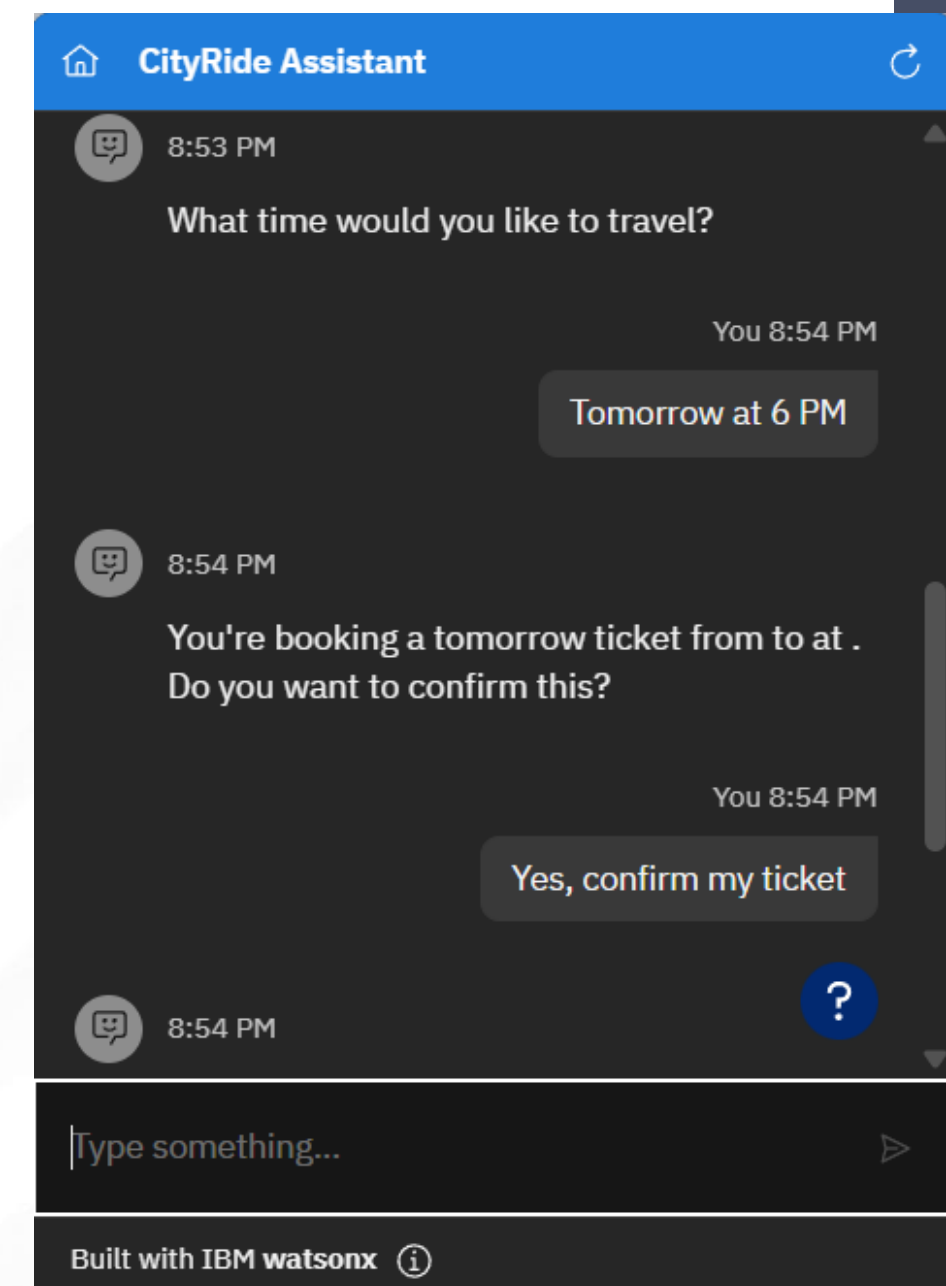
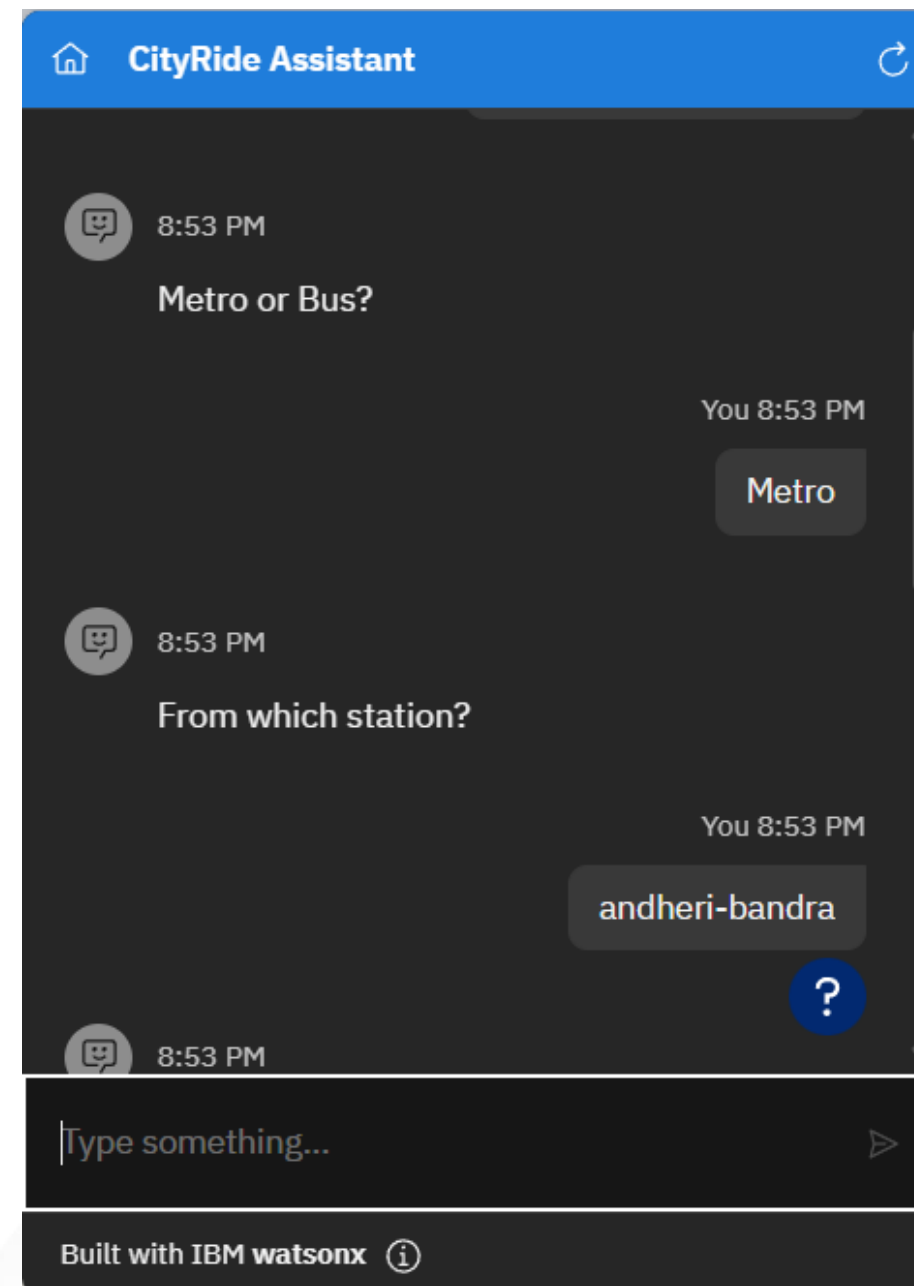
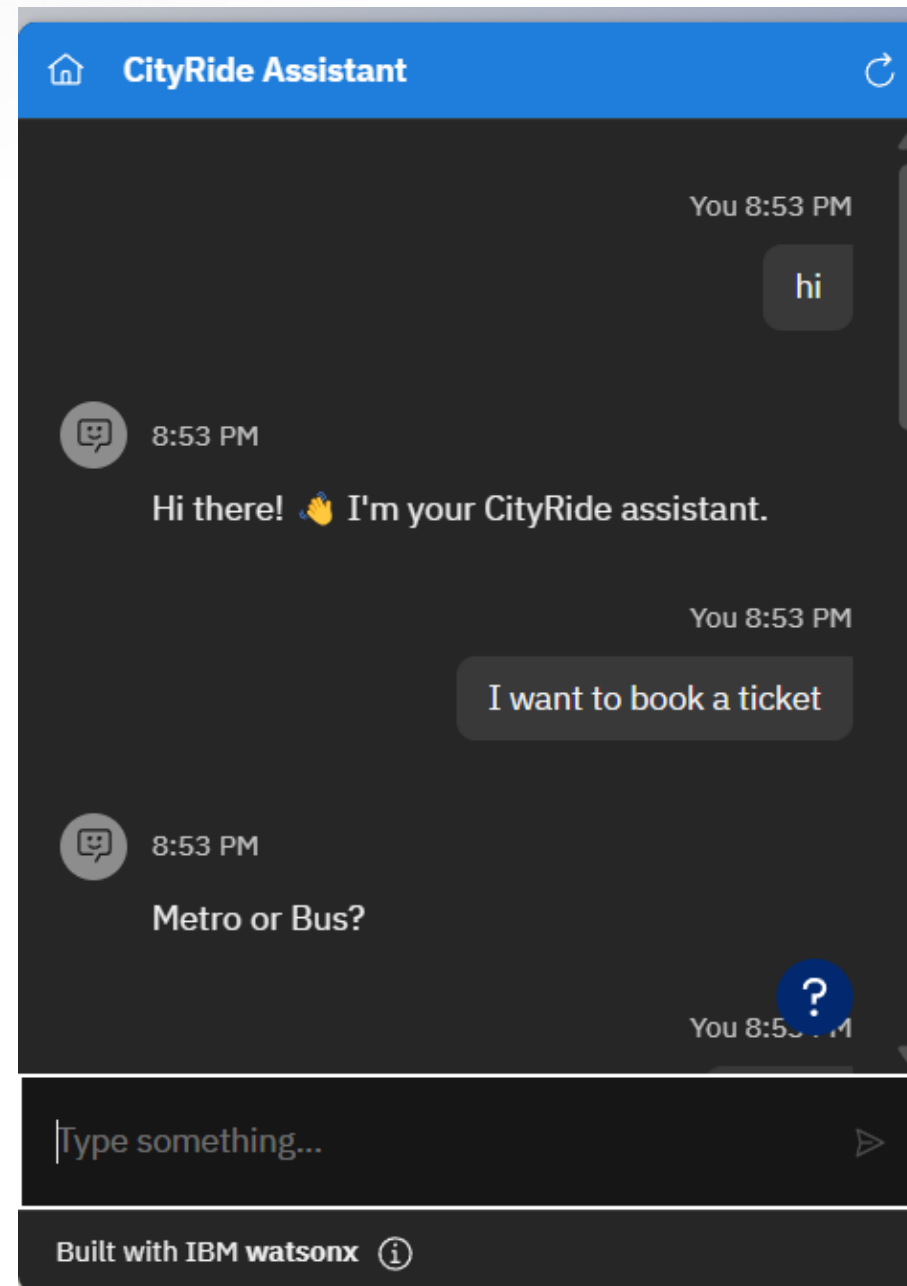
User: Tomorrow at 6 PM

Bot: Please confirm your booking: Metro ticket from Andheri to Bandra for tomorrow at 6 PM. Shall I confirm it?

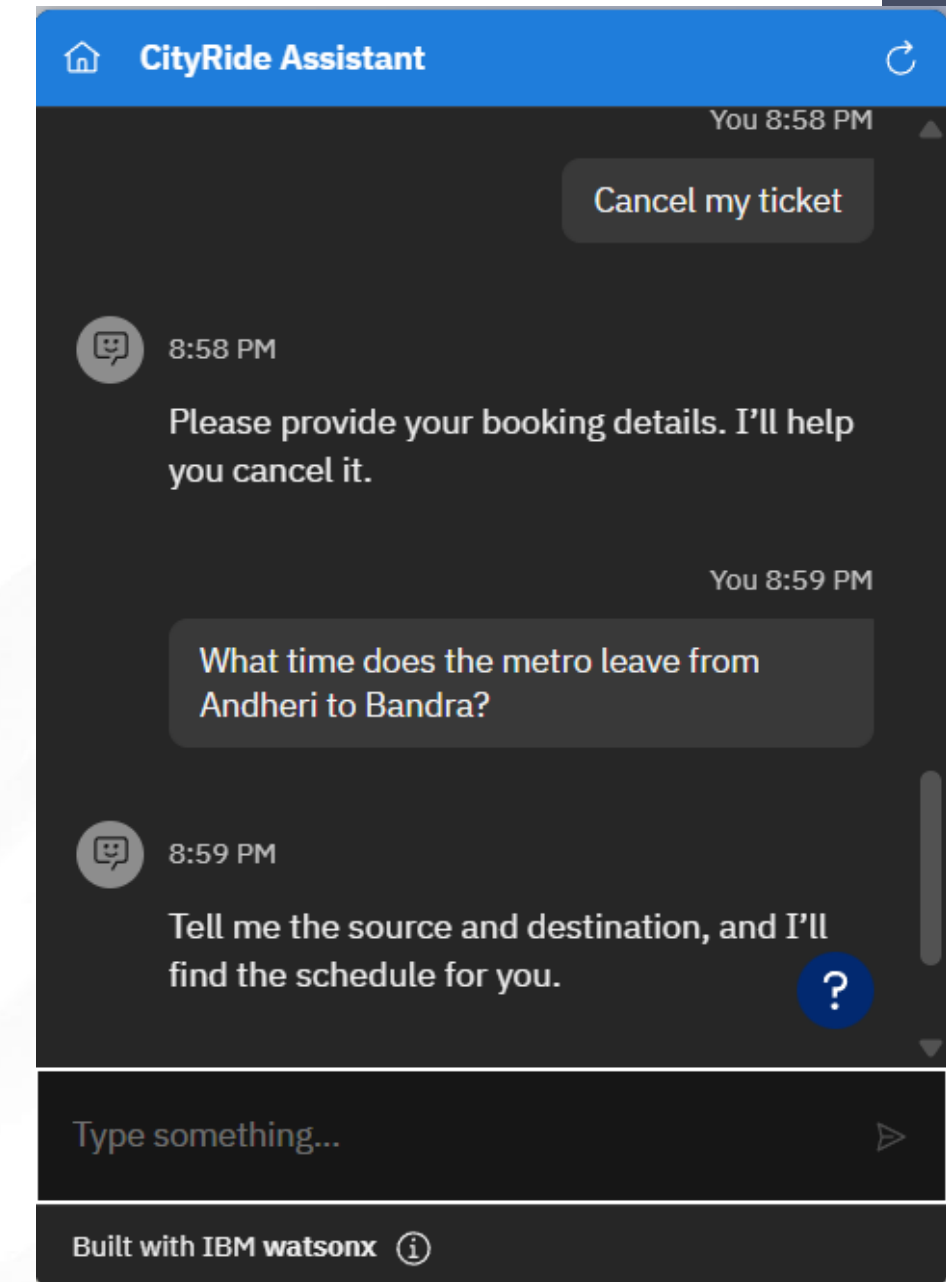
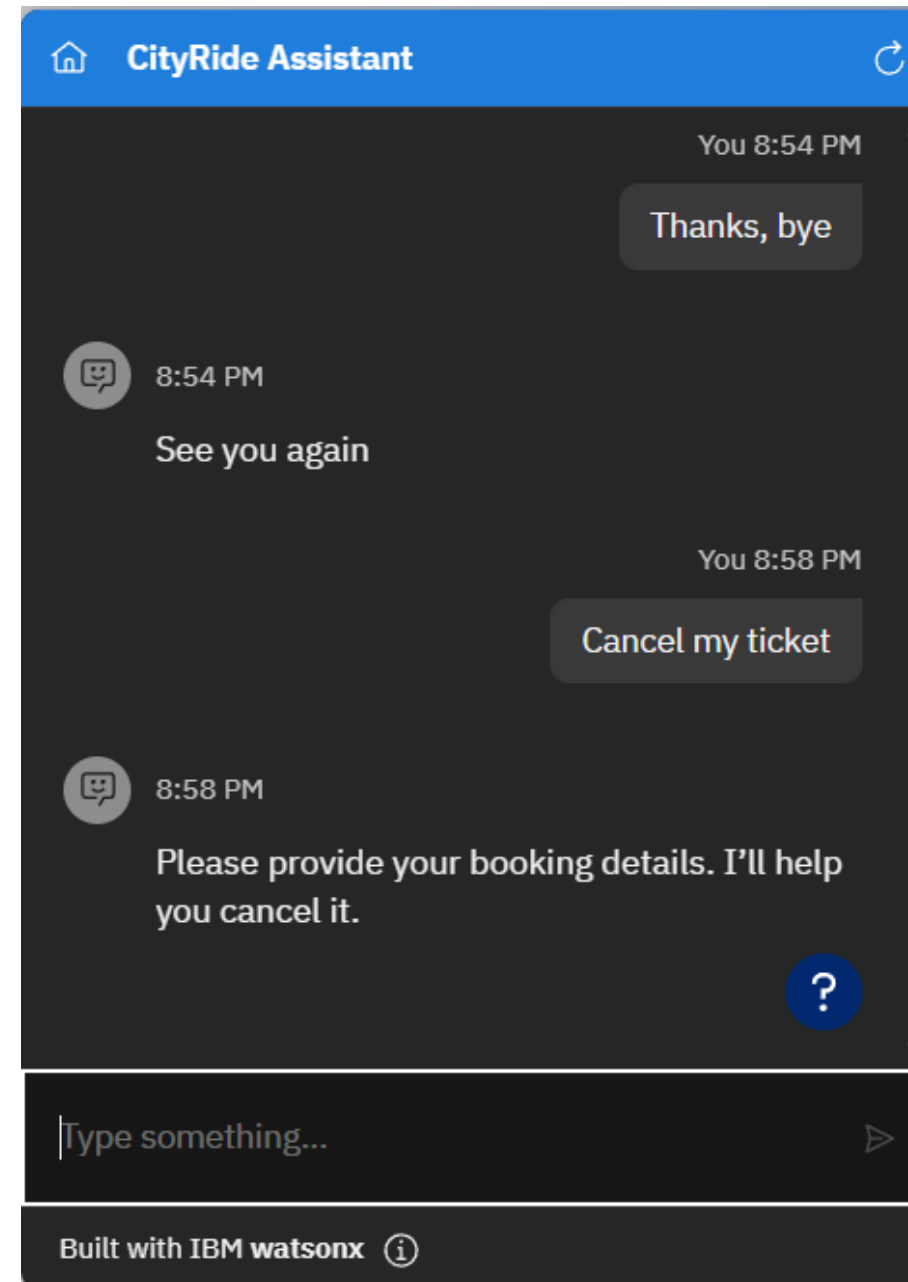
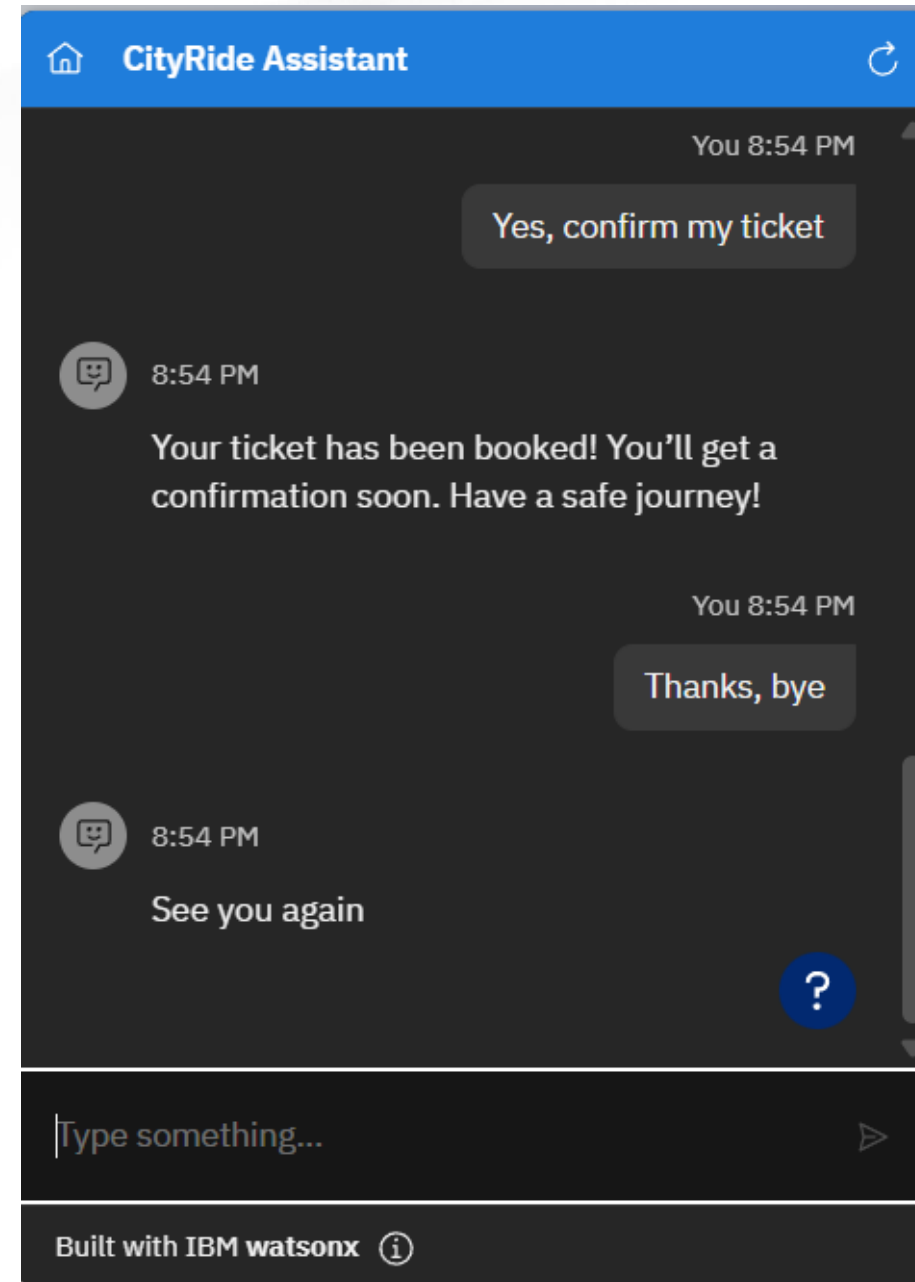
User: Yes

Bot:  Your ticket from Andheri to Bandra has been confirmed. Thank you!

WORKING MODEL



WORKING MODEL



FARE LOGIC



Collect Stations
From/To

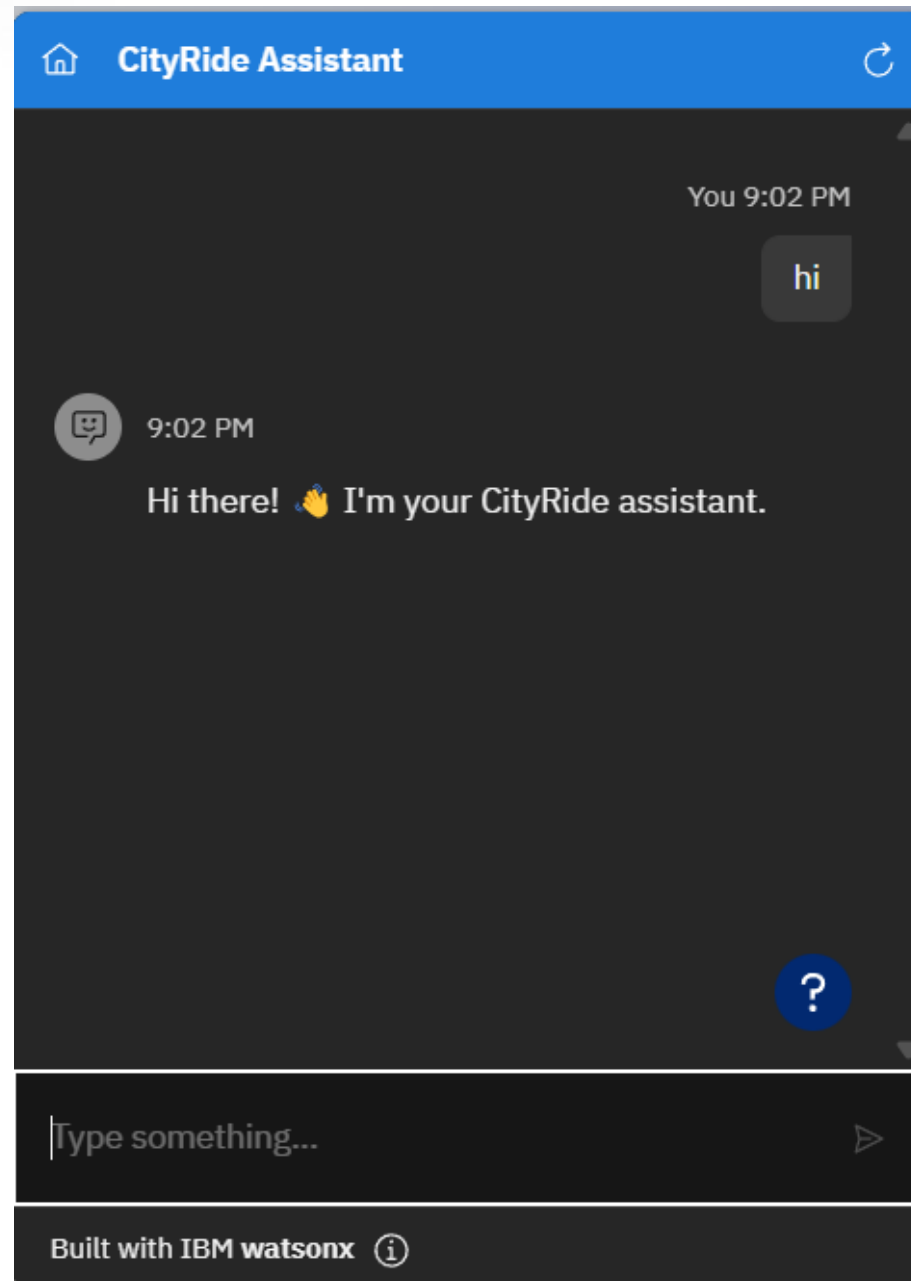


Conditional Logic
Evaluate route

55km		more than 42 km
Kolkata (Run by Indian Railways)	₹25 for 25-30 km max fare for multiple stretches is ₹ 50	
61Km		
Lucknow	₹60 above 18 stations	
22.9Km		
Kochi	₹60 for 25Km	
25.6Km		
Jaipur	₹30 for 9-10 stations	
12Km		

Return Fare
Display price

BENEFITS & FUTURE SCOPE



- Convenient ticket booking via chat
- Scalable to include live bus/train APIs
- Can add:
 - Payment Integration
 - Real-time tracking
 - Seat selection



KEY TAKEAWAYS

Scalable Solution
Built on IBM Cloud.

User-Friendly
Conversational
design.

Efficient Booking
Streamlined process.



THANK YOU

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