

An
Industrial Training Report
On

Introduction to Artificial Intelligence with IBM

Submitted in partial fulfillment of the requirement for the VII semester

Bachelor of Technology

By

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Under the guidance of

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GRAPHIC ERA HILL UNIVERSITY, BHIMTAL CAMPUS

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2022-2023

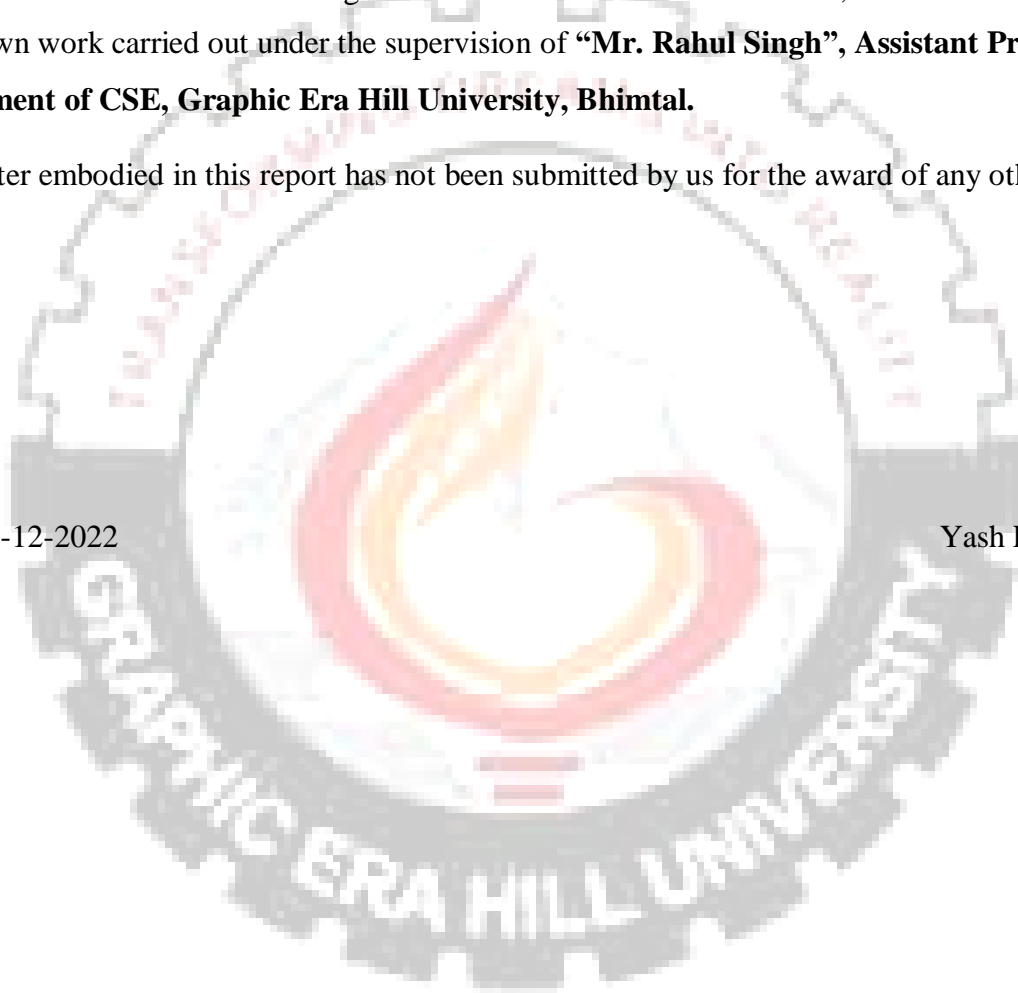
STUDENT'S DECLARATION

I, Yash Rawat, hereby declare the work, which is being presented in the industrial training report entitled **“Introduction to Artificial Intelligence (AI) with IBM”** in partial fulfillment of the requirement for the award of the degree **B. Tech** in the session 2022-2023, is an authentic record of my own work carried out under the supervision of **“Mr. Rahul Singh”, Assistant Professor Department of CSE, Graphic Era Hill University, Bhimtal.**

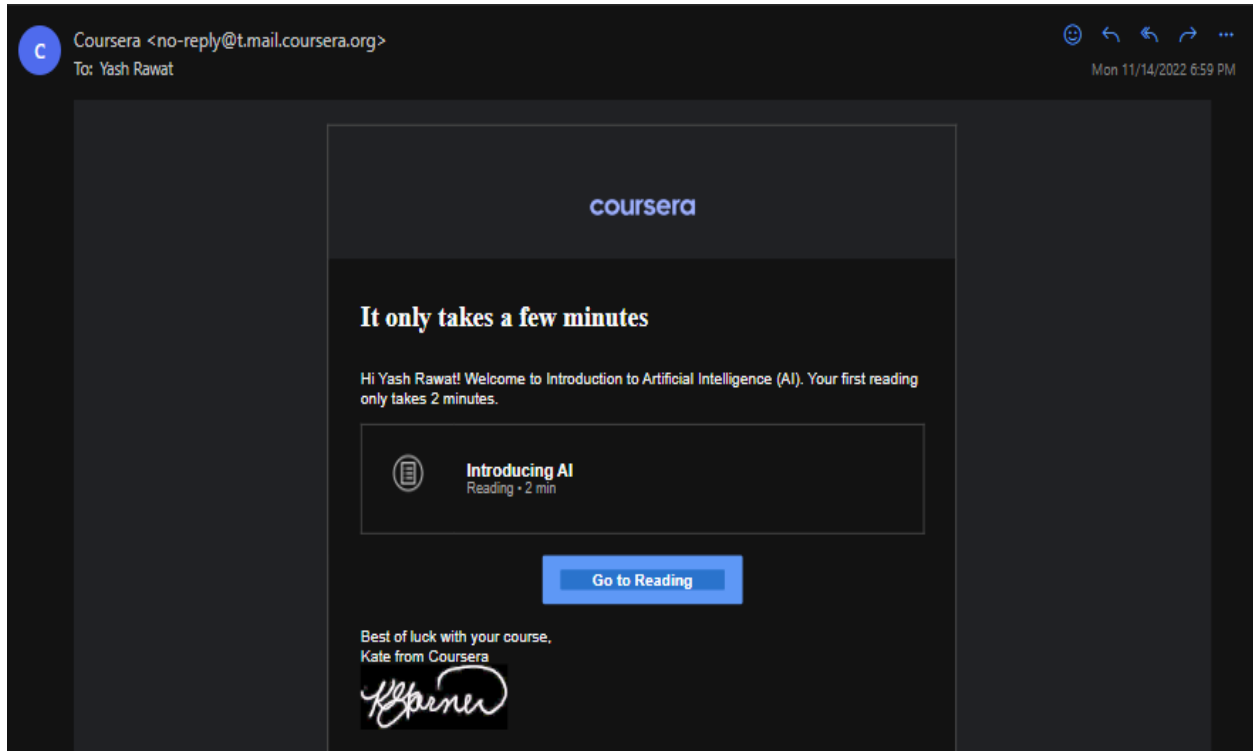
The matter embodied in this report has not been submitted by us for the award of any other degree.

Date: 13-12-2022

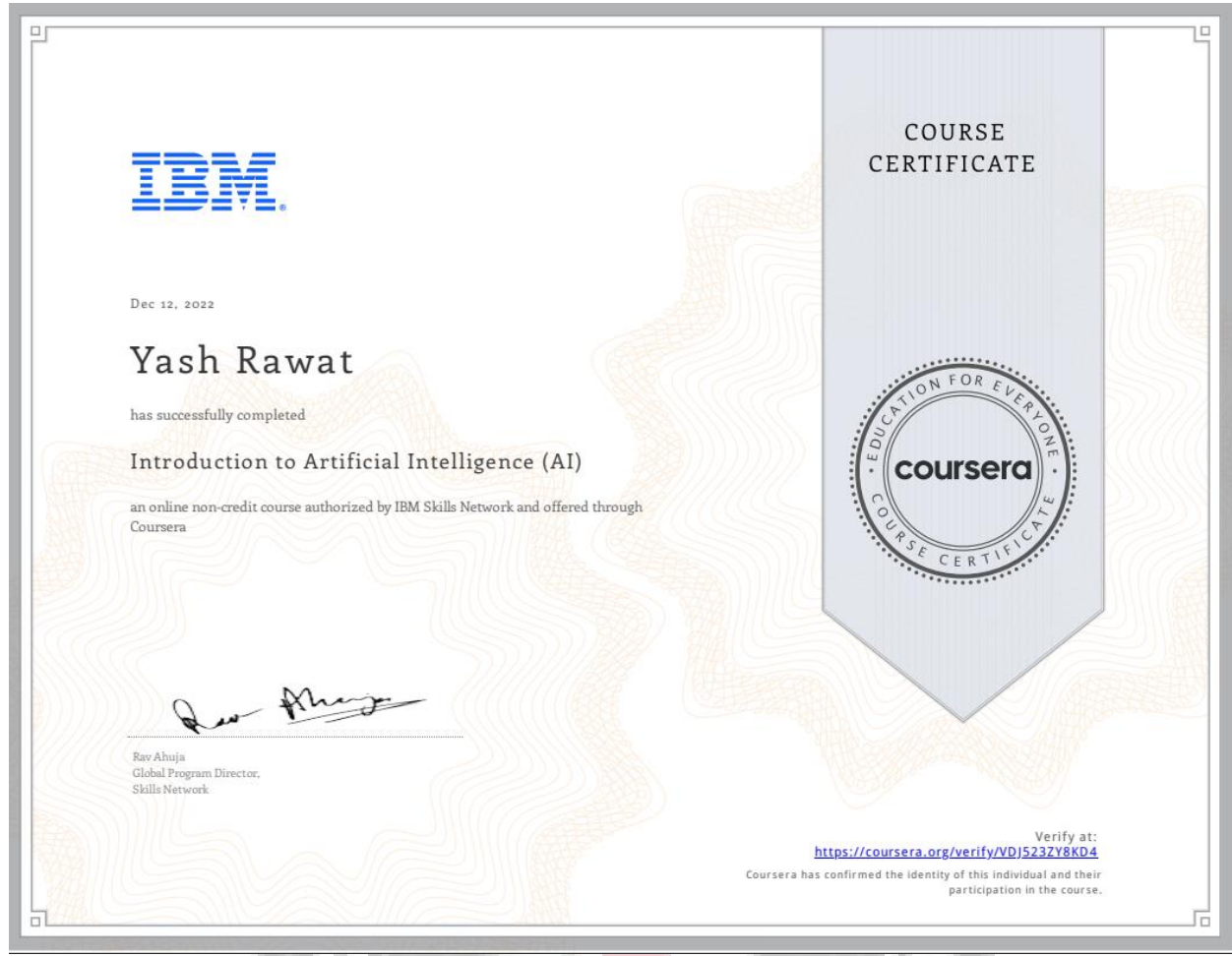
Yash Rawat



COURSE TRAINING PROOF



CERTIFICATE



ACKNOWLEDGEMENT

I take immense pleasure in thanking Mr. Rahul Singh, Mr. Rav Ahuja for providing me with the golden opportunity and to permit me to learn about AI and train and use AI models. This has been possible due to their noble inspiration, guidance and supervision.

A special thanks to Mr. Rav Ahuja, Global Program Director of IBM Skills Network for guiding me during the creation of this project. His support, knowledge and guidance helped me to learn a lot during the 4 weeks of training from 14th Nov 2022 to 12th Dec 2022.

I extend my gratitude towards IBM Skills Network team to support me and provide me with a beautiful and comfortable environment to accomplish tasks assigned to me during the AI model training and learning.

Yash Rawat

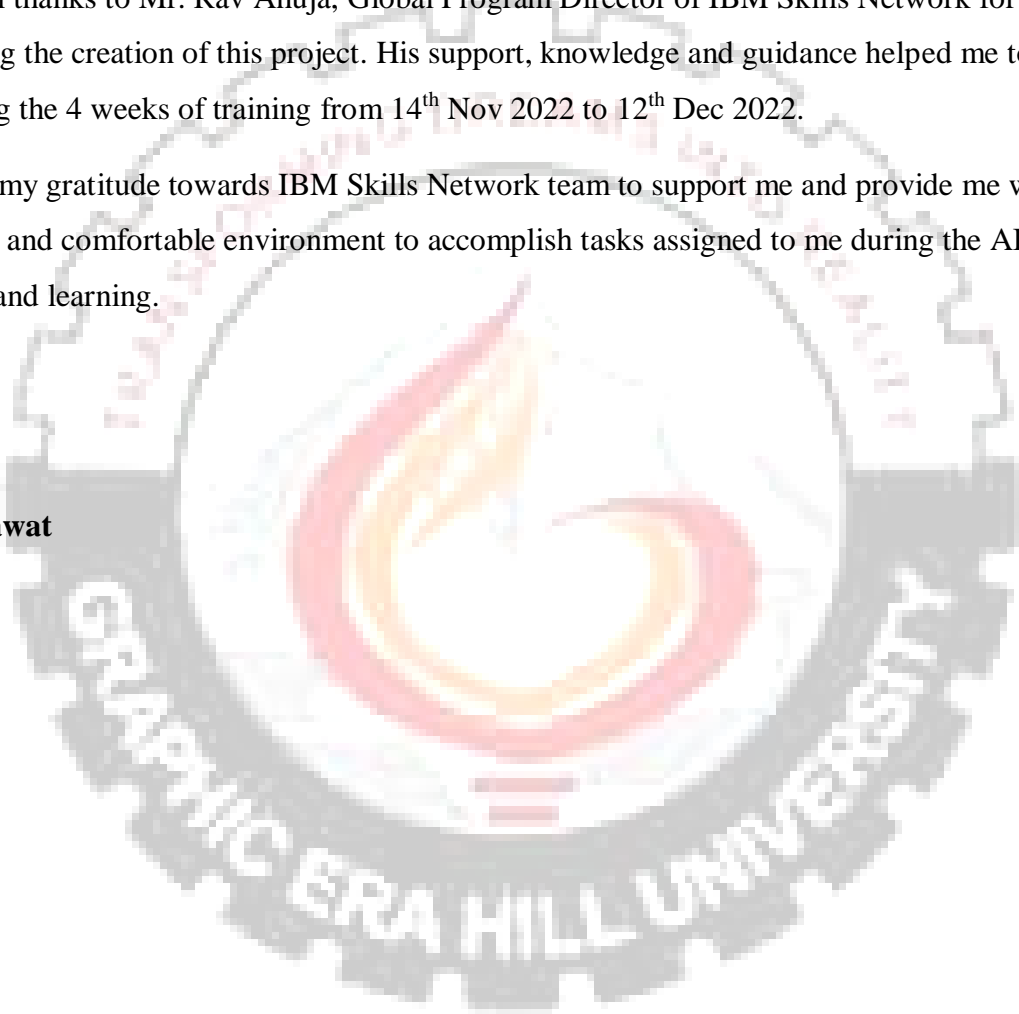


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EXECUTIVE SUMMARY

The 4 weeks Virtual Industrial training program at IBM Skills Network is a vital part of the 4-years B. Tech course. This training course is an integrated part of the course, which is provided by Graphic Era Hill University, Bhimtal.

The training course includes:

In this training course I have learned what Artificial Intelligence (AI) is, explore use cases and applications of AI, understand AI concepts and terms like machine learning, deep learning and neural networks. You will be exposed to various issues and concerns surrounding AI such as ethics and bias, & jobs, and get advice from experts about learning and starting a career in AI.

I also demonstrated a project regarding the AI where I learnt:

- how chatbots work
- how chatbots respond when they don't quite understand user inputs
- how to detect when a conversation breaks down
- Lastly, study how to improve chatbot responses

ABOUT THE ORGANISATION

The **International Business Machines Corporation (IBM)** is an American multinational technology corporation headquartered in Armonk, New York, with operations in over 171 countries. The company began in 1911, founded in Endicott, New York, by trust businessman Charles Ranlett Flint, as the Computing-Tabulating-Recording Company (CTR) and was renamed "International Business Machines" in 1924. IBM is incorporated in New York.

IBM produces and sells computer hardware, middleware and software, and provides hosting and consulting services in areas ranging from mainframe computers to nanotechnology. IBM is also a major research organization, holding the record for most annual U.S. patents generated by a business (as of 2021) for 29 consecutive years.

Inventions by IBM include the automated teller machine (ATM), the floppy disk, the hard disk drive, the magnetic stripe card, the relational database, the SQL programming language, the UPC barcode, and dynamic random-access memory (DRAM). The IBM mainframe, exemplified by the System/360, was the dominant computing platform during the 1960s and 1970s.

IBM is one of 30 companies included in the Dow Jones Industrial Average and one of the world's largest employers, with over 282,100 employees as of 2022.



ABOUT THE PROJECT

Project Overview

In this course, you have learned about Artificial Intelligence and its applications. You will learn about chatbots in this hands-on lab.

Chatbots are also one of the applications of Artificial Intelligence (AI) in which simulated interactive demonstrations are developed using AI tools in the form of a chatbot.

The project is divided into two parts: in the first part, you learn how chatbots work and in the second part you will learn how they respond when they don't quite understand you.

Project Scenario

You are part of an AI team and are assigned to a project where you will use the necessary knowledge to interact with this chatbot. The expected learning outcome is to utilize IBM AI-enabled interactive services and improve users' experiences. Sometimes human conversation with chatbots gets very ugly and, depending upon the outcome of the interaction, it can be classified as "Egregious" or "Non-Egregious"

Objectives:

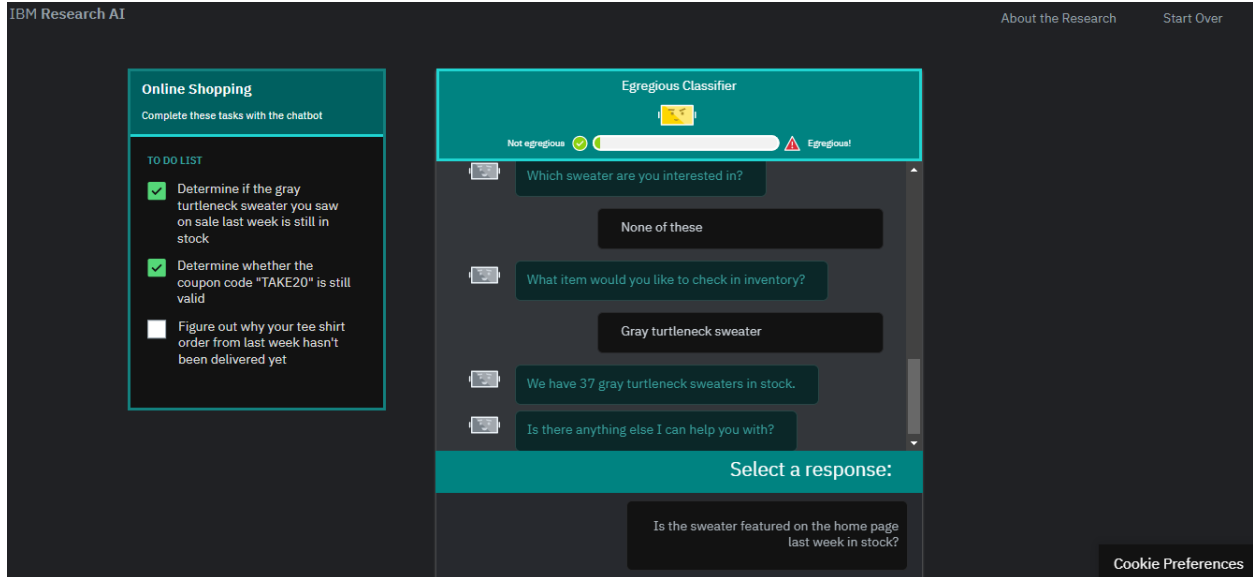
- Learn how chatbots work
- Learn how chatbots respond when they don't quite understand user inputs
- Learn how to detect when a conversation breaks down
- Lastly, study how to improve chatbot responses

You are a part of an AI team and you have been equipped with the necessary knowledge to interact with this chatbot.

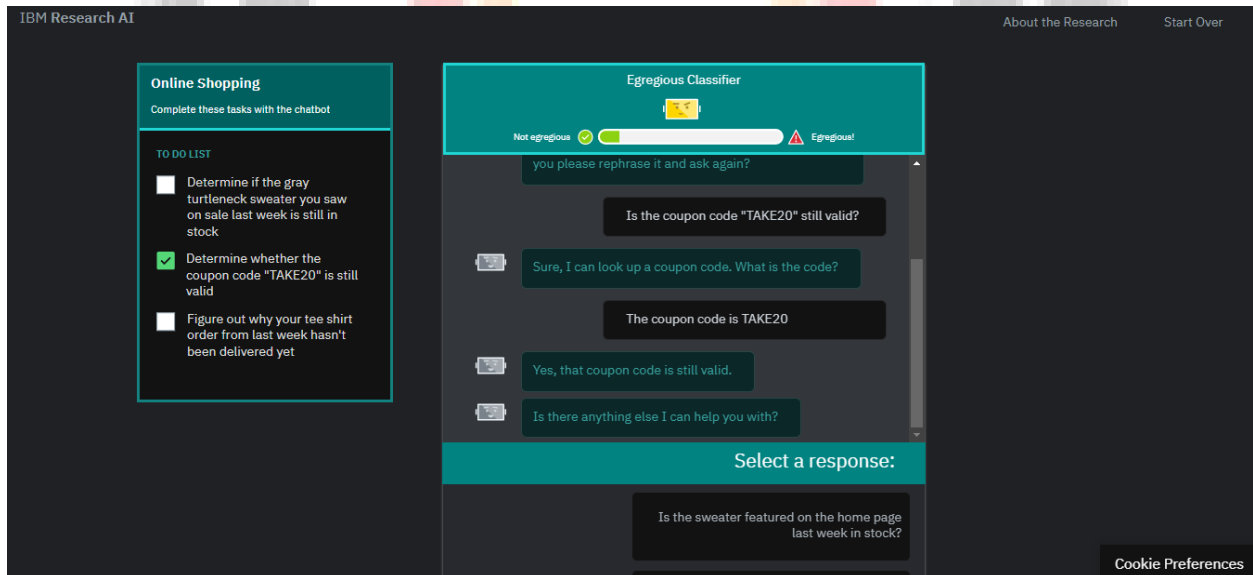
It is recommended that you take this opportunity to apply your knowledge and explore how AI-enabled products can transform the world.

SNAPSHOTS OF THE PROJECT

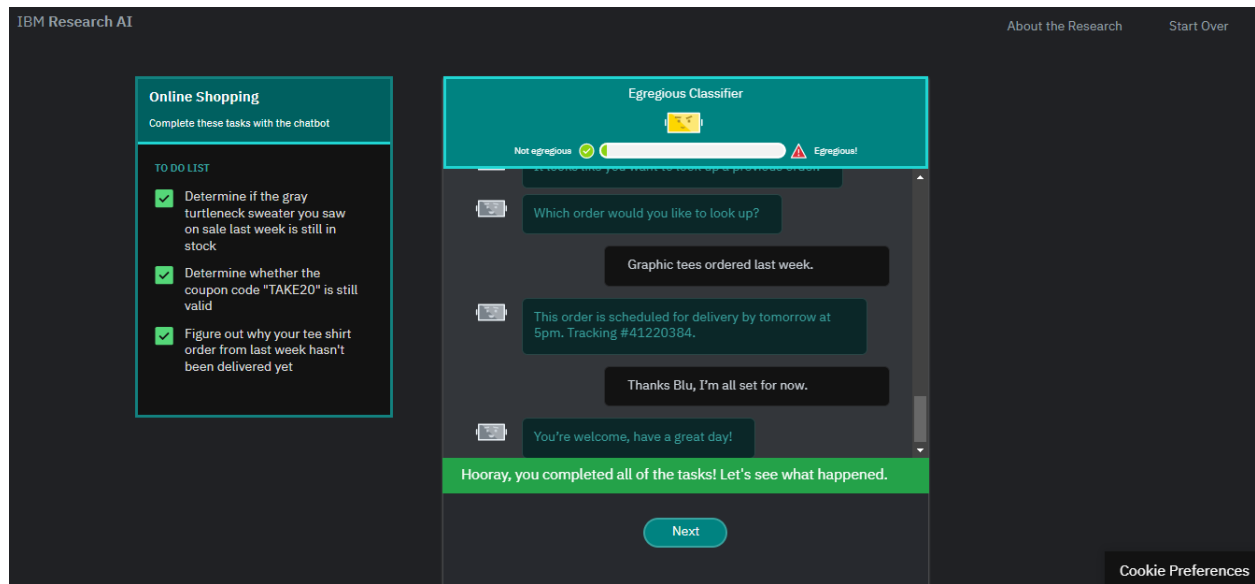
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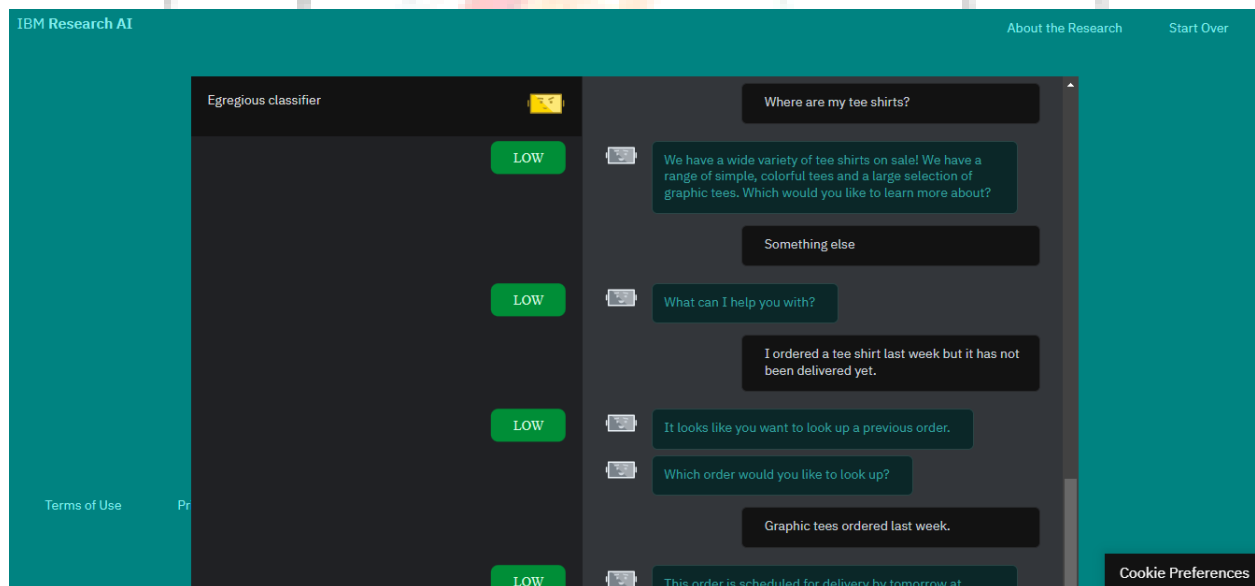
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3.



4.



5.


IBM Research AI

About the ResearchStart Over

The Banking Scenario


Banking


Be a chatbot and help a customer with a banking question



Online Shopping

Work with a chatbot to complete some online shopping tasks



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CONCLUSION

I started this course with Module 1 and learnt what AI is. I understood its applications and use cases and how it is transforming our lives.

In Module 2, I got a basic understanding of how AI works, familiarized yourself with terminology like Machine Learning, Supervised Learning, Unsupervised Learning, Training Data, Deep Learning, and Neural Networks. You also got to know about some of the key fields of application of AI including Natural Language Processing, Speech, Computer Vision, and Self Driving Cars.

In Module 3, I explored several issues and ethical considerations surrounding AI, such as Bias, impact on employment, etc.

In Module 4, I heard about how AI may evolve and impact our future. You also heard from several experts about learning and starting a career in AI. And finally, you demonstrated AI in action by getting Watson to classify images.

At the end, I worked on 1 project and completed this training course and learned a lot from this.

