AI PROJECT LOGBOOK

Resource for Students

(Adapted from "IBM EdTech Youth Challenge – Project Logbook" developed by IBM in collaboration with Macquarie University, Australia and Australian Museum)

KEY PARTNERS

INDIA IMPLEMENTATION PARTNERS

GLOBAL PARTNERS

AI Project Logbook

PROJECT NAME: Travel suggestions and bookings for users using ChatBot (Trekker)

SCHOOL NAME: Bal Bharati Public School, Noida

YEAR/CLASS: 2023-2024 XII-B

TEACHER NAME: Asha Menon

TEACHER EMAIL: asha.menon@nd.balbharati.org

TEAM MEMBER NAMES AND GRADES:

1. Saumya Datt
2. Divyansh Mishra

1. Introduction

This document is your **Project Logbook**, and it will be where you record your ideas, thoughts and answers as you work to solve a local problem using AI.

Make a copy of the document in your shared drive and work through it digitally with your team. You can also print a copy of the document and submit a scanned copy once you have completed the Project Logbook. Feel free to add pages and any other supporting material to this document.

Refer to the **AI Project Guide** for more details about what to do at each step of your project.

2. Team Roles

2.1 Who is in your team and what are their roles?

Role	Role description	Team Member Name
1. Project Leader 2. Prototype builder 3. Research Analyst	1. Creating the chatbot using Google Dialogflow ES 2. Testing and picking between the right entities for the Travel-based chatbot 3. Researching data for chatbot	Saumya Datt
1. Video producer 2. Research Analyst	1. Creating the website for the chatbot using 2. Creating video for the chatbot using 3. Researching data for chatbot	Divyansh Mishra

2.2 Project plan

The following table is a guide for your project plan. You may use this or create your own version using a spreadsheet which you can paste into this section. You can expand the 'Notes' section to add reminders, things that you need to follow up on, problems that need to be fixed urgently, etc.

Phase	Task	Planned start date	Planned end date	Planned duration (hours, minutes)	Actual start date	Actual end date	Actual duration (hours, minutes)	Who is responsible	Notes/Remarks
Preparing for the project	Coursework, readings	28th June, 2023	28th June, 2023	2.0 hrs	28th June, 2023	28th June, 2023	2.0 hrs	Saumya Datt	
	Set up a team folder on a shared drive	1st July, 2023	1st July, 2023	20 mins	1st July, 2023	1st July, 2023	20 mins	Divyansh Mishra	
Defining the problem	Background reading	6th July, 2023	6th July, 2023	3.0 hrs	6th July, 2023	6th July, 2023	3.0 hrs	Saumya Datt Divyansh Mishra	
	Research issues in our community	9th July, 2023	9th July, 2023	3.0 hrs	9th July, 2023	9th July, 2023	3.0 hrs	Saumya Datt	
	Team meeting to discuss issues and select an issue for the project	14th July, 2023	14th July, 2023	2.5 hrs	14th July, 2023	14th July, 2023	2.5 hrs	Saumya Datt Divyansh Mishra	
	Complete section 3 of the Project Logbook	19th July, 2023	19th July, 2023	1.5 hrs	19th July, 2023	19th July, 2023	1.5 hrs	Saumya Datt Divyansh Mishra	
	Rate yourselves	20th July, 2023	20th July, 2023	1 hrs	20th July, 2023	20th July, 2023	1 hrs	Saumya Datt Divyansh Mishra	

Understanding the users	Identify users	29th July, 2023	29th July, 2023	2 hrs	29th July, 2023	29th July, 2023	2 hrs	Saumya Datt	
	Meeting with users to observe them	7th August, 2023	7th August, 2023	5 hrs	7th August, 2023	7th August, 2023	5 hrs	Divyansh Mishra	
	Interview with user (1)	9th August, 2023	9th August, 2023	1 hrs	9th August, 2023	9th August, 2023	1 hrs	Divyansh Mishra	
	Interview with user (2), etc…	9th August, 2023	9th August, 2023	1 hrs	9th August, 2023	9th August, 2023	1 hrs	Saumya Datt	
	Complete section 4 of the Project Logbook	13th August, 2023	13th August, 2023	2.5 hrs	13th August, 2023	13th August, 2023	2.5 hrs	Saumya Datt Divyansh Mishra	
	Rate yourselves	14th August, 2023	14th August, 2023	1 hrs	14th August, 2023	14th August, 2023	1 hrs	Saumya Datt Divyansh Mishra	
Brainstorming	Team meeting to generate ideas for a solution	16th August, 2023	16th August, 2023	**2 hrs**	16th August, 2023	16th August, 2023	**2 hrs**	Saumya Datt Divyansh Mishra	
	Complete section 5 of the Project Logbook	18th August, 2023	18th August, 2023	1 hrs	18th August, 2023	18th August, 2023	1 hrs	Saumya Datt Divyansh Mishra	
	Rate yourselves	19th August, 2023	19th August, 2023	1 hrs	19th August, 2023	19th August, 2023	1 hrs	Saumya Datt Divyansh Mishra	
Designing your solution	Team meeting to design the solution	25th August, 2023	25th August, 2023	1 hrs	25th August, 2023	25th August, 2023	1 hrs	Saumya Datt Divyansh Mishra	
	Complete section 6 of the logbook	25th August, 2023	25th August, 2023	**2 hrs**	25th August, 2023	25th August, 2023	**2 hrs**	Saumya Datt Divyansh Mishra	
	Rate yourselves	26th August, 2023	26th August, 2023	1 hrs	26th August, 2023	26th August, 2023	1 hrs	Saumya Datt Divyansh Mishra	

Collecting and preparing data	Team meeting to discuss data requirements	27th August, 2023	27th August, 2023	**2 hrs**	27th August, 2023	27th August, 2023	**2 hrs**	Saumya Datt Divyansh Mishra	
Collecting and preparing data Prototyping	Data collection	27th August, 2023	27th August, 2023	**2 hrs**	27th August, 2023	27th August, 2023	**2 hrs**	Saumya Datt	
	Data preparation and labelling	**30th** August, 2023	**30th** August, 2023	**2 hrs**	**30th** August, 2023	**30th** August, 2023	**2 hrs**	Divyansh Mishra	
	Complete Section 6 of the Project Logbook	**30th** August, 2023	**30th** August, 2023	**2.5 hrs**	**30th** August, 2023	**30th** August, 2023	**2.5 hrs**	Saumya Datt Divyansh Mishra	
	Team meeting to plan prototyping phase	2nd Sept, 2023	2nd Sept, 2023	2 hrs	2nd Sept, 2023	2nd Sept, 2023	2 hrs	Saumya Datt Divyansh Mishra	
Prototyping Testing	Train your model with input dataset	4th Sept, 2023	4th Sept, 2023	2 hrs	4th Sept, 2023	4th Sept, 2023	2 hrs	Saumya Datt	
	Test your model and keep training with more data until you think your model is accurate	4th Sept, 2023	4th Sept, 2023	3 hrs	4th Sept, 2023	4th Sept, 2023	3 hrs	Saumya Datt Divyansh Mishra	

	Write a program to initiate actions based on the result of your model	9th Sept, 2023	9th Sept, 2023	3 hrs	9th Sept, 2023	9th Sept, 2023	3 hrs	Saumya Datt	
	Complete section 8 of the Project Logbook	10th Sept, 2023	10th Sept, 2023	2 hrs	10th Sept, 2023	10th Sept, 2023	2 hrs	Saumya Datt Divyansh Mishra	
	Rate yourselves	10th Sept, 2023	10th Sept, 2023	1 hrs	10th Sept, 2023	10th Sept, 2023	1 hrs	Saumya Datt Divyansh Mishra	
	Team meeting to discuss testing plan	11th Sept, 2023	11th Sept, 2023	2 hrs	11th Sept, 2023	11th Sept, 2023	2 hrs	Saumya Datt Divyansh Mishra	
Testing Creating the video	Invite users to test your prototype	17th Sept, 2023	17th Sept, 2023	2 hrs	17th Sept, 2023	17th Sept, 2023	2 hrs	Saumya Datt	
	Conduct testing with users	17th Sept, 2023	17th Sept, 2023	2 hrs	17th Sept, 2023	17th Sept, 2023	2 hrs	Saumya Datt	
	Complete section 9 of the Project Logbook	19th Sept, 2023	19th Sept, 2023	2 hrs	19th Sept, 2023	19th Sept, 2023	2 hrs	Saumya Datt Divyansh Mishra	
	Rate yourselves	19th Sept, 2023	19th Sept, 2023	1 hrs	19th Sept, 2023	19th Sept, 2023	1 hrs	Saumya Datt Divyansh Mishra	
	Team meeting to discuss video creation	21st Sept, 2023	21st Sept, 2023	2 hrs	21st Sept, 2023	21st Sept, 2023	2 hrs	Saumya Datt Divyansh Mishra	
	Write your script	22nd Sept, 2023	22nd Sept, 2023	1 hrs	22nd Sept, 2023	22nd Sept, 2023	1 hrs	Saumya Datt	
	Film your video	26th Sept, 2023	26th Sept, 2023	2 hrs	26th Sept, 2023	26th Sept, 2023	2 hrs	Divyansh Mishra	
	Edit your video	27th Sept, 2023	27th Sept, 2023	2 hrs	27th Sept, 2023	27th Sept, 2023	2 hrs	Divyansh Mishra	
Completing the logbook	Reflect on the project with your team	5th Oct, 2023	5th Oct, 2023	2 hrs	5th Oct, 2023	5th Oct, 2023	2 hrs	Saumya Datt Divyansh Mishra	
	Complete sections 10 and 11 of the Project Logbook	5th Oct, 2023	5th Oct, 2023	2 hrs	5th Oct, 2023	5th Oct, 2023	2 hrs	Saumya Datt Divyansh Mishra	
	Review your Project logbook and video	7th Oct, 2023	7th Oct, 2023	2 hrs	7th Oct, 2023	7th Oct, 2023	2 hrs	Divyansh Mishra	
Submission	Submit your entries on the IBM								

2.3 Communications plan

Will you meet face-to-face, online or a mixture of each to communicate?
The team members met on a regular basis through Google meet and most discussions were carried out within the school campus.

How often will you come together to share your progress?
In order to share our progress with each other, a meeting was held during the weekends.

Who will set up online documents and ensure that everyone is contributing?
The online documents were set up by the Group leader and the video/website editor, the group leader made sure that both contributed equally.

What tools will you use for communication?

- Whatsapp
- Gmail
- GMeet
- G Suite

2.4 Team meeting minutes (create one for each meeting held)

Date of meeting:
28th June, 2023

Who attended:
Saumya Datt,
Divyansh Sharma

Purpose of meeting:
Action plan for project

Items discussed:
1. Course work readings
2. Setup up a team folder on Google drive
3. Project timeline scheduled

Things to do (what, by whom, by when)
1.Setup up a team folder on Google drive
2. Project logbook update

Date of meeting:
29th June, 2023

Who attended:
Saumya Datt
Divyansh Sharma

Purpose of meeting:
Defining the problem

Items discussed:
1. Background reading
2. Research issues in our community
3. Issues discussed

Things to do (what, by whom, by when)
1. Project logbook update
2. Local Issues listed
3. Issue to focus on
4. Identify Users

Date of meeting:
30th June,2023

Who attended:
Saumya Datt
Divyansh Sharma

Purpose of meeting:
User requirements

Items discussed:
1. Meeting with User
2. Points to be discuss with user

Things to do (what, by whom, by when)
1. Project logbook update
2. Discussion with user
3. Understanding the requirement

Date of meeting:
1st July, 2023

Who attended:
Saumya Datt
Divyansh Sharma

Purpose of meeting:
Brainstorming

Items discussed:
1. Ideas for solutions to be discussed

Things to do (what, by whom, by when)
1. Project logbook update
2. Generation of ideas and collect the relevant data

3. Problem Definition

3.1 List important local issues faced by your school or community

Being unable to decide or select a travel destination in India that suits everyone.

3.2 Which issues matter to you and why?

1. Identifying the ideal travel destination based on user's selection of month of visit
2. Selecting a destination lacking the experience the user/family wished for due to confusion

3.3 Which issue will you focus on?

Assisting the user in making the right travel selection through a couple of questions by a chatbot.

3.4 Write your team's problem statement in the format below.

How can we help a family find a way to select a travel destination that fulfils their ideal holiday planning.

4. The Users

4.1 Who are the users and how are they affected by the problem?

The project was built, keeping in mind the needs of the families. This project focuses on understanding and analysing the personality of the users interacting with our chatbot. This helps them select a destination based on their requirements.

4.2 What have you actually observed about the users and how the problem affects them?

1. Collectively varied opinions and interests while choosing a travel destination leading to confusion

4.3 Record your interview questions here as well as responses from users.

Q. How often do you plan outings or trips with your family? A. Once a year usually or a short outing twice a year. Q. Do you face issues while deciding a place to visit with your family? A. Yes, we are unable to come to a conclusion sometimes, but we reason it out come to a decision by majority. Q. Will a travel-based chatbot be helpful to you while making such decisions? A. It will, since our travel is barely twice a year, we would like to have a site catering to our needs and requirements. Q. What are your expectations from our chatbot? A. The output or destination selected by the chatbot should suit our preferences and requirements. Q. Anything you would like to add to our model in future? A. It should eventually be able to pick a destination taking our budget and duration into consideration.

4.4 Empathy Map

Map what the users say, think, do and feel about the problem in this table

What our users are saying	**What our users thinking**
Too many options Several varied opinions	A solid model that helps make these decisions Reduces differences in opinion and helps reach a collective solution

What our users are doing	How our users feel
Attempting to pick a destination to visit through their own research	A model helpful for this entire process to be easier and reliable

4.5 What are the usual steps that users currently take related to the problem and where are the difficulties?

1. Browses several sites for ideas and places to visit
2. Narrows the options down to a few spots
3. Moves on further with the discussion over where to go with family members and friends
4. Occasionally unable to decide with several varied opinions and suggestions

4.6 Write your team's problem statement in the format below.

Families are experiencing issues with picking a travel destination today

because of not enough depth on the locations or due to too many opinions.

5. Brainstorming

5.1 Ideas

How might you use the power of AI/machine learning to solve the users' problem by increasing their knowledge or improving their skills?

AI Idea #1	Chatbots use AI and ML to remember user conversations and agent training takes places constantly
AI Idea #2	AI can help detect user's likes and dislikes
AI Idea #3	It can help in removing bias while training the models
AI Idea #4	Leads to higher efficiency

5.2 Priority Grid

Evaluate your five AI ideas based on value to users and ease of creation and implementation.

High value to users, easy to create	High value to users, hard to create
High value to users, easy to create a chatbot that would help people with their questions	High value to users, hard to create a chatbot that would do both prediction and suggestions based on past chats.

Low value to users, easy to create Low value to users, easy to create a chatbot that can identify the most frequently requested question.	Low value to users, hard to create Low value to users, hard to create a chatbot that can identify the most requested question and suggest a solution and changes.

Easy

Hard

5.3 Based on the priority grid, which AI solution is the best fit for your users and for your team to create and implement?

Briefly summarize the idea for your solution in a few sentences and be sure to identify the tool that you will use.

Through Google Dialogflow, AI can predict and help users decide a travel destination. Based on these results and options provided by the chatbot on the destinations available based on their selection of the travel month, users can come to a decision. On selecting the travel destination, the chatbot further helps in making travel bookings to the selected destination instantly after a few simple questions.

Rate yourself	9

Brainstorming 1 point – 2 points - 3 points -	ng session was conducted. A solution was selected. ing session was conducted using creative and critical thinking. A solution was this section ing session was conducted using creative and critical thinking. A compelling with supporting arguments in this section.

Design

6.1 What are the steps that users will now do using your AI solution to address the problem?

1. The chatbot first asks the user if they have a destination in India selected beforehand

2. The user mentions the states, if one, and the chatbot provides the top 5 destinations to visit

3. In case the user is not aware of the destination, the chatbot asks the month they plan on travelling

4. Based on the selection of month, the chatbot provides a list of the most ideal states to visit during that specific month

5. The user then selects one out of the provided options

6. The chatbot then shares the top destinations to explore for the selected state

7. The user asks the chatbot to book flights to the destination

8. After a few questions based on travel distance, time and date, the chatbot books the flight

6. Data

7.1 What data will you need to train your AI solution?

Data is fed into the chatbot through research and the agent is trained after every edit.

7.2 Where or how will you source your data?

Data needed	Where will the data come from?	Who owns the data?	Do you have permission to use the data?	Ethical considerations
Have	**From site**	**Sites**	**yes**	**Open source**
Want/Need	**User**	**User**	**yes**	**Shared by user**
Nice to have	**Site/User**	**Sites**	**yes**	**Open source**

Rate yourself	9	
Data 1 point – sourced or collected. 2 points - 3 points - been considered.	colle evide	ata to train the AI model have been identified as well as how the data will be lata to train the AI model have been identified as well as how the data will be . There is evidence that the dataset is balanced. lata to train the AI model have been identified as well as how the data will be e that the dataset is balanced, and that safety and privacy have

7. Prototype

8.1 Which AI tool(s) will you use to build your prototype?

Google Dialogflow CX

8.2 Which AI tool(s) will you use to build your solution?

Google Dialogflow CX

8.3 What decisions or outputs will your tool generate and what further action needs to be taken after a decision is made?

Creates a chatbot which caters to user's responses and needs.

Rate yourself	10	
Prototype		
1 point – 2 points - 3 points - requirements.		or a prototype shows how the AI model will work. A or the solution has been created and trained. e for the solution has been created and successfully trained to meet users'

8. Testing

9.1 Who are the users who tested the prototype?

Friends, Colleagues, Teachers, Parents

9.2 List your observations of your users as they tested your solution.

- Able to pick destinations based on their decisions and arriving at a solution
- Approving highlighted destinations made by chatbot on the selected states

9.3 Complete the user feedback grid

What works	What needs to change
Able to select their ideal travel destination	Add in budget options and change the suggested places to visit incase the user doesn't approve or like it.

Questions?	Ideas
Is it possible for the chatbot to provide an itinerary based on user's no. of days picked for travel?	Itinerary Budget options Travel suggestions across more than just one state

9.4 Refining the prototype: Based on user testing, what needs to be acted on now so that the prototype can be used?

Addition to a website with a domain

9.5 What improvements can be made later?

Addition of more countries for ideal travel suggestions. (Spread outside India)

9. Team collaboration

10.1 How did you actively work with others in your team and with stakeholders?

We could actively work with other team members by collaborating online, collecting user requirements, conducted brainstorming sessions, defining problem statement, defining prototype, data acquisition, data exploration, getting user's feedback, reviewing the state holder requirements, designing the model, training and test model, evaluating the model and refined prototype considering user requirements.

10. Individual learning reflection

11.1. Team Reflections

A good way to identify what you have learned is to ask yourself what surprised you during the project. List the things that surprised you and any other thoughts you might have on issues in your local community.

Team member name: Saumya Datt

As the team leader, I gained leadership qualities and I understood the importance of hardwork. My listening skills improved as I had to listen to the problems of my teammates and resolve them. Thanks to this project I've got a newfound interest towards gaining new skills, in this case, how to use google dialogflow.

Team member name: Divyansh Mishra

Have gained an interest in AI and its applications as well as in editing videos after this project. Hoping to learn more about AI through more such projects.

11. Chatbot Link

URL: https://bot.dialogflow.com/543f06b7-ddb2-4d7c-a890-7e8e40335054

12. Video Link

Enter the URL of your team video:
https://www.canva.com/design/DAF5q2wR2b4/NLNRwzC36FfBZ_9VNvD9-Q/edit?ui=eyJHIjp7fX0

Appendix

Recommended Assessment Rubric (for Teachers)

LOGBOOK AND VIDEO CONTENT

Steps	3 points	2 points	1 point	Points Given
Problem definition	A local problem which has not been fully solved before is explained in detail with supporting research.	A local problem which has not been fully solved before is described.	A local problem is described	
The Users	Understanding of the user group is evidenced by completion of all of the steps in *Section 4 The Users* and thorough investigation.	Understanding of the user group is evidenced by completion of most of the steps in *Section 4 The Users*.	The user group is described but it is unclear how they are affected by the problem.	
Brainstorming	A brainstorming session was conducted using creative and critical thinking. A compelling solution was selected with supporting arguments from *Section 5 Brainstorming.*	A brainstorming session was conducted using creative and critical thinking. A solution was selected with supporting arguments in *Section 5 Brainstorming.*	A brainstorming session was conducted. A solution was selected.	
Design	The use of AI is a good fit for the solution. The new user experience is clearly documented showing how users will be better served than they are today.	The use of AI is a good fit for the solution and there is some documentation about how it meets the needs of users.	The use of AI is a good fit for the solution.	
Data	Relevant data to train the AI model have been identified as well as how the data will be sourced or collected. There is evidence that the dataset is balanced, and that safety and privacy have been considered.	Relevant data to train the AI model have been identified as well as how the data will be sourced or collected. There is evidence that the dataset is balanced.	Relevant data to train the AI model have been identified as well as how the data will be sourced or collected.	
Prototype	A prototype for the solution has been created and successfully trained to meet users' requirements.	A prototype for the solution has been created and trained.	A concept for a prototype shows how the AI model will work	
Testing	A prototype has been tested with a fair representation of users and all tasks in *Section 9 Testing* have been completed.	A prototype has been tested with users and improvements have been identified to meet user requirements.	A concept for a prototype shows how it will be tested.	
Team collaboration	Effective team collaboration and communication among peers and stakeholders is clearly documented in *Section 10 Team collaboration*.	Team collaboration among peers and stakeholders is clearly documented in *Section 10 Team collaboration*.	There is some evidence of team interactions among peers and stakeholders.	
Individual learning	Each team member presents a reflective and insightful account of their learning during the project.	Each team presents an account of their learning during the project.	Some team members present an account of their learning during the project.	
Total points				

VIDEO PRESENTATION

Criteria		Points Given 3 – excellent 2 – very good 1 – satisfactory
Communication	The video is well-paced and communicated, following a clear and logical sequence.	
Illustrative	Demonstrations and/or visuals are used to illustrate examples, where appropriate.	
Accurate language	The video presents accurate science and technology and uses appropriate language.	
Passion	The video demonstrates passion from team members about their chosen topic/idea.	
Sound and image quality	The video demonstrates good sound and image quality.	
Length	The content is presented in the video within a 3-minute timeframe.	
Total points		