Thanks for filling out this form: Project-Based Learning (PBL) Report

1 message

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To: roopavathyg1616@gmail.com

Wed, Feb 4, 2026 at 1:16 PM

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Thanks for filling out this form: Project-Based Learning (PBL) Report

Here's what was received.

Edit response

Project-Based Learning (PBL) Report

Before you begin filling out this form, please make sure you have the following items ready:

- Your day-wise notes for all stages of Design Thinking — *Empathize, Define, Ideate, Prototype, and Test*
- Screenshots of your innovation
-

Screen recordings showcasing your innovation's working model

- Images of your innovation created during the Day 2 take-home task

This form is designed to capture your reflections, ideas, and learnings from the innovations you developed as part of the **IBM SkillsBuild PBL activity**. Please take 5–10 minutes to complete it thoughtfully and honestly.

Email *

roopavathyg1616@gmail.com

Name *

Roopavathy G

Email ID (as per IBM Skills Build) *

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Phone number *

8220413049

Trainer name *

- (●) Aparna .R
- ( ) Sanjai .M

Raju .P

College Name *

University college of engineering,kanchipuram

Qualification (Degree) *

B.E-CSE

Day 1

Design Thinking Process Step 1 & 2: Empathise & Define

Step 1: Understanding the Need *

Which problem am I trying to solve?

Email spam detection is the problem of automatically identifying whether an email is spam (unwanted or junk mail) or ham (legitimate mail). Due to the huge volume of emails sent daily, manual filtering is impossible, so an automated solution is required.

Step 2: What is the problem?

The problem I want to solve in **one clear sentence**

[You can try a prompt like this: "*I am ideating a solution for <enter your problem in detail> Convert this problem into a single clear sentence which I can share to an audience"]*

The problem I want to solve is to automatically identify and filter spam emails from legitimate emails to protect users from unwanted and harmful messages.

Why is this problem important to solve? *

[You can try a prompt like this: "*Draft 1-2 lines on why this problem is important to solve. Support this with evidence using relevant data points"]*

This problem is important to solve because spam emails waste time, spread scams and malware, and can compromise user privacy and security, so detecting them automatically helps keep communication safe and efficient.

Take-home task *

Ask 2–3 people (you can speak to your family members, friends, teachers, trainers) what they think about this problem. Write down surprising or new things you learn below.

A friend said that spam emails slow down productivity because important emails can get lost among junk messages. This helped me understand that spam detection also improves work efficiency

Day 2

Design Thinking Process Step 3: Ideation

Step 3: Brainstorming solutions *

List **at least 5 different solutions** (wild or realistic)

[You can try a prompt like this: "*I am ideating solutions for <enter your problem in detail> Suggest 5 unique solutions for this problem, which I can easily accomplish in 2 days using free, open-source mobile-friendly AI tools"]*

1.Keyword-Based Spam Filtering
2.Machine Learning Spam Classifier
3.Pretrained AI Text Classification
4.User Feedback–Based Spam Detection
5.Hybrid Spam Detection System

Step 4: My favourite solution: *

My favourite solution: Machine Learning Spam Classifier

Step 5: Why am I choosing this solution?

*

I am choosing this solution because it is simple to implement, gives good accuracy, and efficiently learns to classify emails as spam or not spam using real data.

Take-home task *

Generate the image of your solution and how it will look (eg: “a bag that charges your phone while you walk”)

Attach the image in this box below:

[You can try a prompt like this: “*I am ideating a solution for <enter your problem in detail> I have selected a solution which includes <enter your solution description> Generate an image for this solution]*

Submitted files

Screenshot%202026-02-03%20204956 - Roopavathy G.png

Question

Tools you can use for Day 2

ChatGPT/Perplexity AI:
You can use these tools to compare your solutions and choose the most effective one

AI Tools you can use for the take-home task:

Canva AI/CoPilot
AI/Meta AI: Use these mobile-based tools to generate images for the solution they want to design

Day 3

Design Thinking Process Step 4 & 5: Building & Testing my Prototype

Step 6: Prototype – Building my first version *

What will my solution look like?

[Take inspiration from the image generated on Day 2 and describe the solution]

There is a text box to paste or type an email message A clear “Analyze Email” button is provided The system uses a machine learning (Naive Bayes) model in the background After clicking the button, the result is shown clearly as: Spam Email (in red with a warning icon) Not Spam (in green with a safe icon)

What AI tools will I need to build this?

[You can try a prompt like this: “*I am ideating a solution for <enter your problem in detail> I have designed a solution which includes <enter your solution description> What open-source, free AI tools that I can use to build this solution? The tools should be easily available and accessible on my mobile. Do not recommend tools which requires cost or subscription”]*

*

Bolt ai,chatgpt,crome

Top AI tools I finally selected to build this solution? [Eg: Claude AI, Grok AI, Chatling AI]

Write it in 5 lines as 5 points

*

Bolt AI – Easy to build the project
Bolt AI – Saves time and effort
Bolt AI – Simple to use for beginners
Bolt AI – Works well on mobile
Bolt AI – Helps deploy the project online

Step 7: Test – Getting Feedback

Who did I share my solution with? [You may share it with your trainer, peers or even AI] *

I shared my solution with my trainer, my friends (peers), and AI tools to get feedback and improve the project.

What positive feedback did I receive? *

I received positive feedback that the project idea is useful, the interface is simple and easy to understand, and the spam detection works quickly and effectively.

What feedback did I receive for improvement? *

I received feedback to improve the user interface design, add more sample emails for testing, and display how the model decides whether an email is spam or not to make the project clearer.

Take-home task

Record your solution and test feedback in voice notes.
Upload your voice notes, images and your solution/model on GitHub

AI Tools you can use for Step 6-7:

ChatGPT/Perplexity AI/Claude AI/Canva AI/Chatling AI/Figma AI: You can use these tools to build solutions/models or mock-up dummy prototypes

Day 4

Presenting & Reflecting on my Innovation

Step 8: Presenting my Innovation *

Final Project Title:

Email Spam Detector

Key points of my presentation

*

[You can try a prompt like this with attachment/screenshot of your solution: "*I am ideating a solution for <enter your problem in detail> I have selected a solution which includes <enter your solution description> I tested the solution with <enter details of who tested your solution> and they gave the following feedback <enter feedback given by the testers> Generate a 1-minute pitch document with following headings: project title, problem statement, my innovation, feedback I received from users, impact of my innovation. Add the attached image in the pitch document"*]

Introduction to the email spam detection problem
Importance of spam detection for security and time saving
Chosen solution: Machine Learning (Naive Bayes)
Tools used: Bolt AI
Working of the project with live demo
Results and feedback received
Future improvements and conclusion

Step 9: Reflections *

What did I enjoy the most during this project-based learning (PBL) activity?

I enjoyed the most building the project using AI tools, seeing my spam detection work in real time, and sharing a live project link, which made learning practical and exciting.

Upload images of your day-wise notes/responses of all questions
You can also combine your images into one PDF file and upload
*

Submitted files

PDF project%20screeshot - Roopavathy G.pdf

Upload Mini Project link *

https://ai-spam-detection-mo-zjh9.bolt.host/