

Women in Tech: Hack for the Environment

Start Date: 19 July 2023

[Estimated] End Date: 23 August 2023

REQUIREMENTS

WHAT TO BUILD

Think about how your team might use tech, AI, blockchain and other technologies to come up with answers to the following problems.

- **Waste:** Less than 9% of all plastics are recycled globally. Is there a way you and your team can come up with an idea to increase the recycling rate of plastics, whether in the USA or elsewhere?
- **Deforestation:** Can you come up with a tech idea to track and disrupt deforestation? How might we track deforestation and the increasing number of trees being planted in the Amazon?
- **Endangered species:** Tigers in Southeast Asia, rhinos in Africa. Animals are being poached, decreasing biodiversity. How might we use technology/AI to increase animal biodiversity?
- **Climate change:** Can you think of how tech could help increase the lifespan of car batteries and assist battery-powered cars to go further? Can you think of ways renewable resources could achieve this?

WHAT TO SUBMIT

A functioning MVP ready for immediate use.

OR

Develop a prototype concept for an application that can later become a functioning product.

All of the following items must be included in your submission to the Girls in Tech Devpost page:

1. **Submission form:** Submit your project to the Girls in Tech Devpost before the deadline and complete the submission form questionnaire. Submissions (including video/code links) are editable until the deadline of **August 23**.

Girls in Tech : Hack for the Environment

Deadline: Aug 23, 2023 @ 11:45pm EDT

[Join hackathon](#)

All of the following items must be included in your submission to the Girls in Tech Devpost page:

1. Submission form: Submit your project to the Girls in Tech Devpost before the deadline and complete the submission form questionnaire. Submissions (including video/code links) are editable until the deadline of **August 23**.

What to include:

- An introduction
- Speak about your purpose & motivation
- An explanation on how does the application work
- An explanation on the development of the application
- An explanation on how to use the application
- An explanation on the difficulties & challenges faced during the design and/or development process.
- An explanation on your Go-to-Market Strategy (*How will the application be available to the public, and is it scalable?*)

2. Video : Upload a 3 min video including the following:

- A pitch deck presentation
- A demo of your product, including an explanation of the solution and function of your application.
- This video can be submitted as a Youtube link on your Devpost page for your project. Make sure the video is set to public visibility.
- Please note any video longer than 3 mins will be automatically disqualified

3. GitHub or other code repo link: Please ensure that this link is publicly shareable so judges can access your project.

4. Supporting assets: Provide images, screenshots, & wireframes of your project.

Roles

1. ML Developer 1 (Prutha)
2. ML Developer 2 (Soha)
3. ML Developer 3(Srishti)
4. ML Developer 4 (Neha)
5. Project Manager (Soha, Prutha)
6. Developer (Prutha,Neha)

Agenda

Decide upon MVP or prototype

1. A MVP is a minimum viable product that can run for a small number of users, a prototype is a pre-deployment application that could be deployed.

MVP	Prototype
<input checked="" type="checkbox"/> Srishti	<input type="checkbox"/> Srishti
<input checked="" type="checkbox"/> Soha	<input type="checkbox"/> Soha
<input checked="" type="checkbox"/> Neha	<input type="checkbox"/> Neha
<input checked="" type="checkbox"/> Prutha	<input type="checkbox"/> Prutha

Topic Chosen:

Menstrual waste management analysis and its impact on the environment .

Project Scope:

- Analyzing datasets from credible sources to track and visualize women's health parameters
- Correlating that to how it impacts the environment
- Waste management, women's health awareness, recycling and reuse of waste generated.

Datasets: (Using Quantitative Data)

ML Developer	Title	Source	Attributes
Prutha	1. Population by literacy, age, sex and urban/rural residence	1. UNdata record view Population by literacy, age, sex and urban/rural residence	1. Literacy rates in urban vs rural areas 2. Use of reusable

	2. Joint Monitoring Programme for Water Supply, Sanitation and Hygiene	2. JMP 2023 WLD	material vs single use material in urban vs rural areas (Dataset updated March 2023)
Neha	<p>1. Menstrual products: A comparable Life Cycle</p> <p>2. Women's Cognition and Attitude with Eco-Friendly Menstrual Products by Consumer Lifestyle</p>	<p>1. https://www.sciencedirect.com/science/article/pii/S2666789422000277#appsec1</p> <p>2. https://www.mdpi.com/1660-4601/18/11/5534</p>	
Srishti	<p>1. Absorbents used</p> <p>2. Disposal of the absorbent</p>	1. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4785312/table/BMJOPEN2015010290TB3/?report=objectonly	
Soha			

Project Description

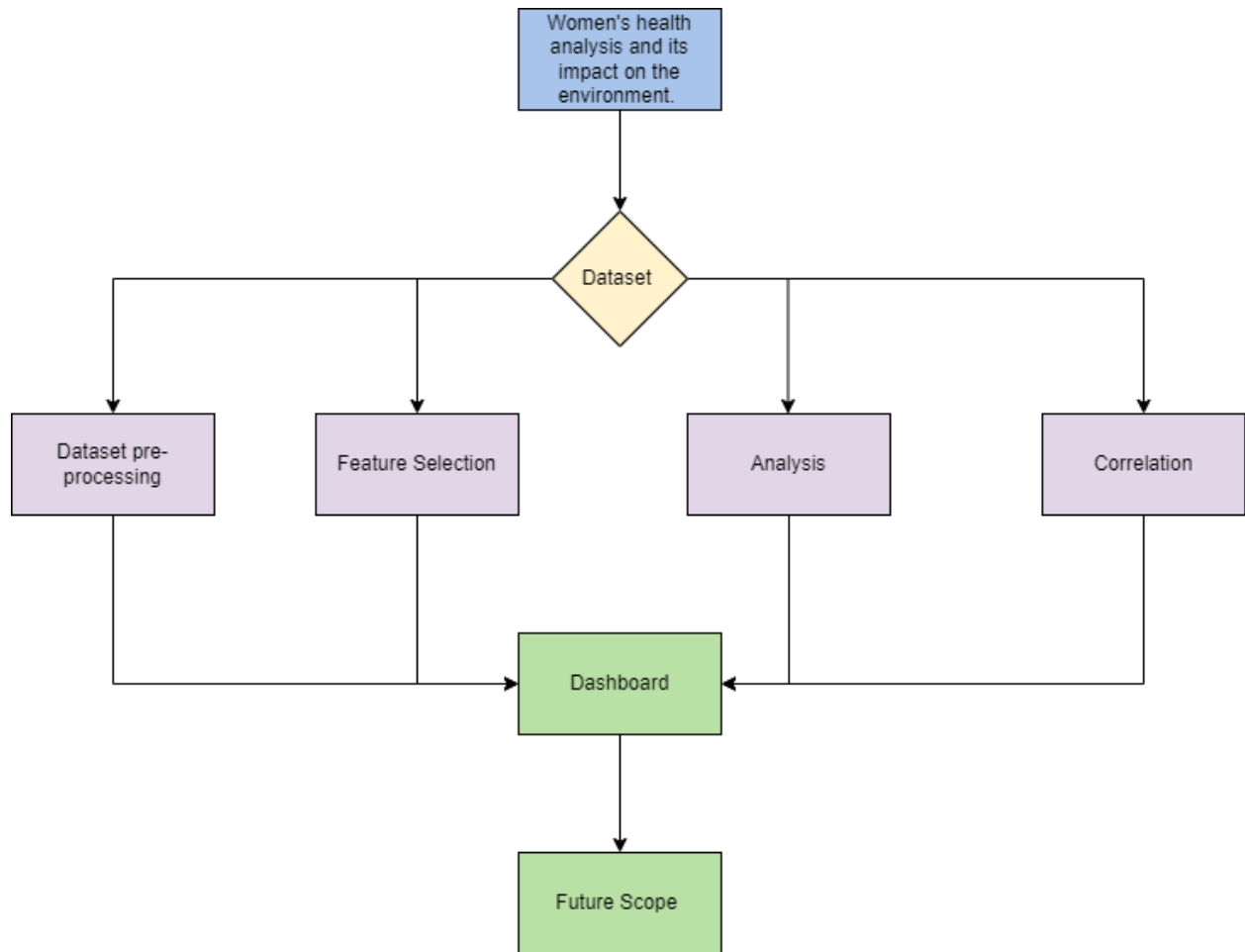









Fig 1.Project Description

Deliverables

Deliverable	Date	Description	Progress
1.SOW	16.08.23	Scope of Work	✓
2.Sign up as a team	26.07.23	Team registration	✓
3. Data Pre-processing	19.08.23	Draft 1: Standardization, Normalization, Cleaning, Transformation	Pruthi: ✓ Srishti: ✓

4.Data Analysis	21.08.23	Draft 2: Data Visualization and Dashboard	Prutha:  Neha  Srishti 
5. SMS/Email System	23.08.23	Mass alert to subscribers	
6. Videography	21.08.23	Full day of shooting	
7. Testing	22.08.23	Test MVP	
8. Pitch and Report	22.08.23	Create full report with results from testing phase	
9.Submission	23.08.23	Worst Case	

Analysis Screenshots

Prutha

Sheet 1

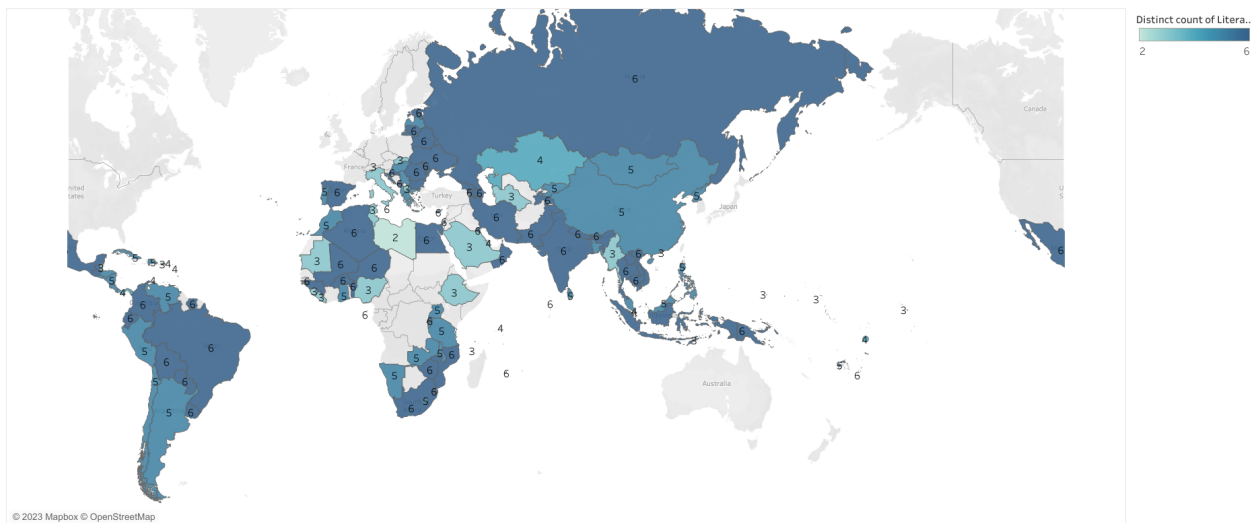


figure: Literacy rates in different countries [UN Dataset]

Menstrual Waste Generation Country Wise

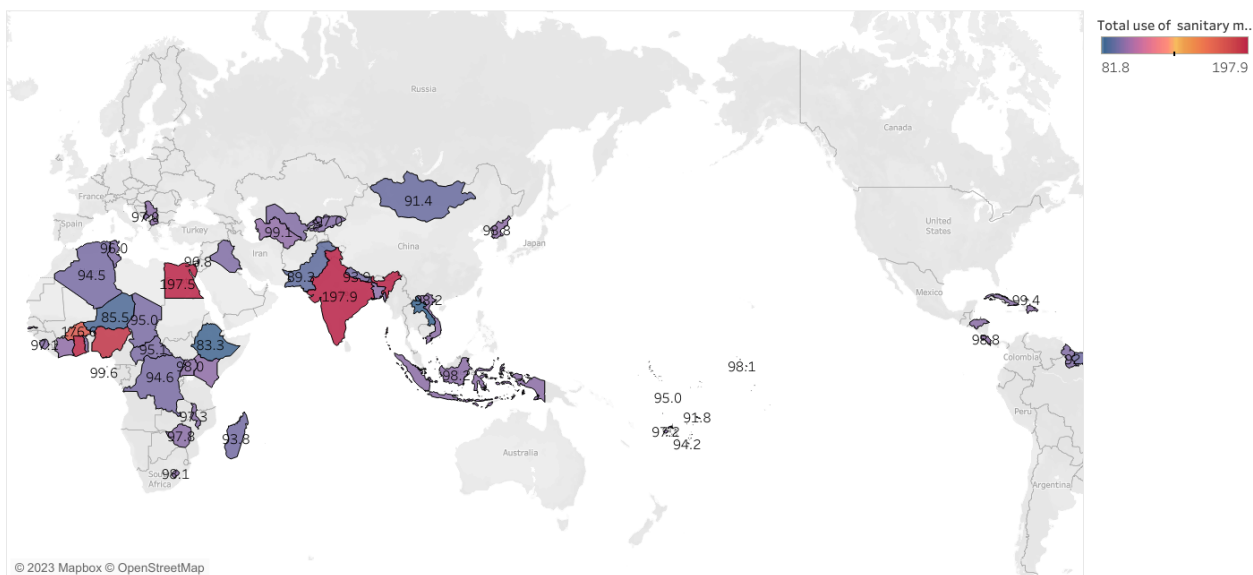


figure: Menstrual Waste Generation (Total) [WHO Dataset]

Rural Areas (Country Wise)

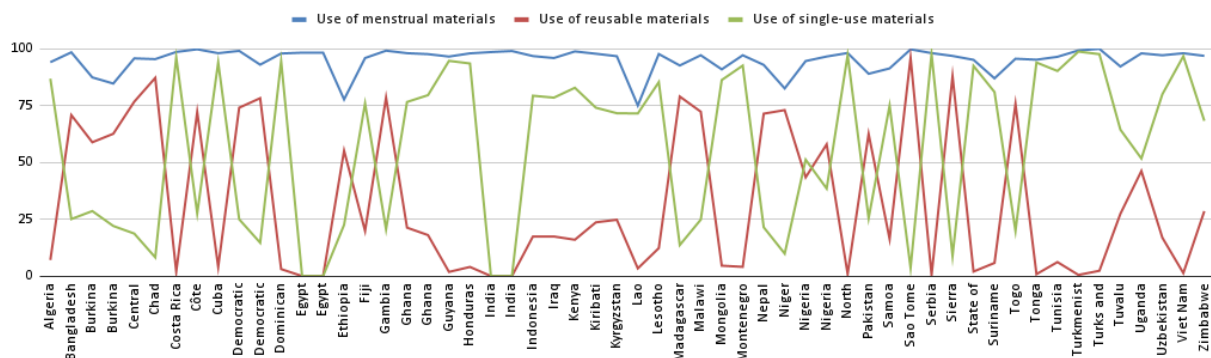


figure: Waste Generation in Rural Areas by type [WHO Dataset]

Urban Areas (Country Wise)

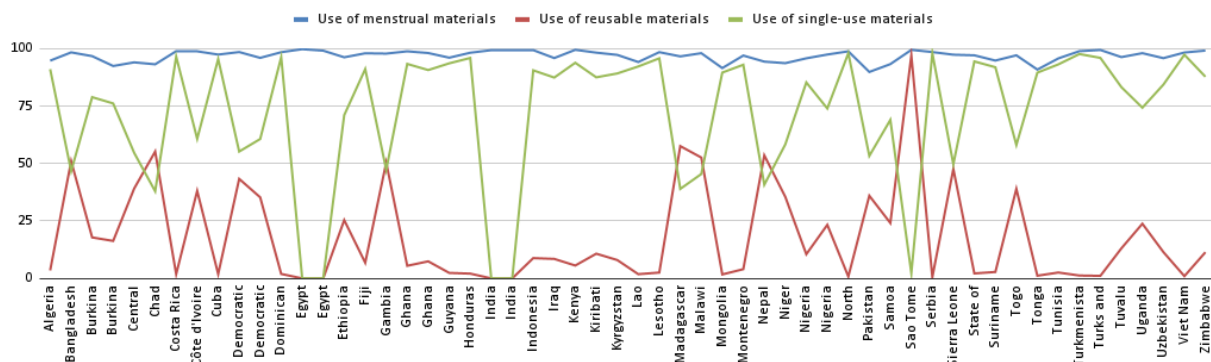
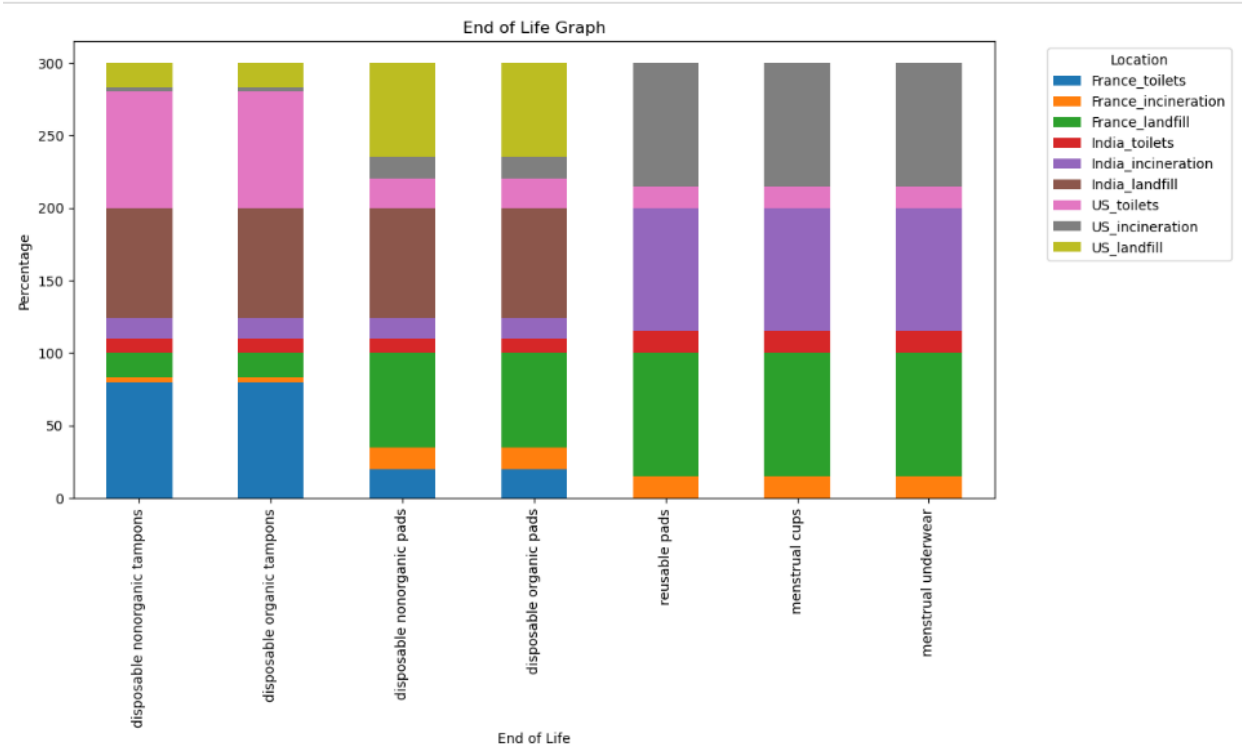


figure: Waste Generation in Urban Areas by type [WHO Dataset]

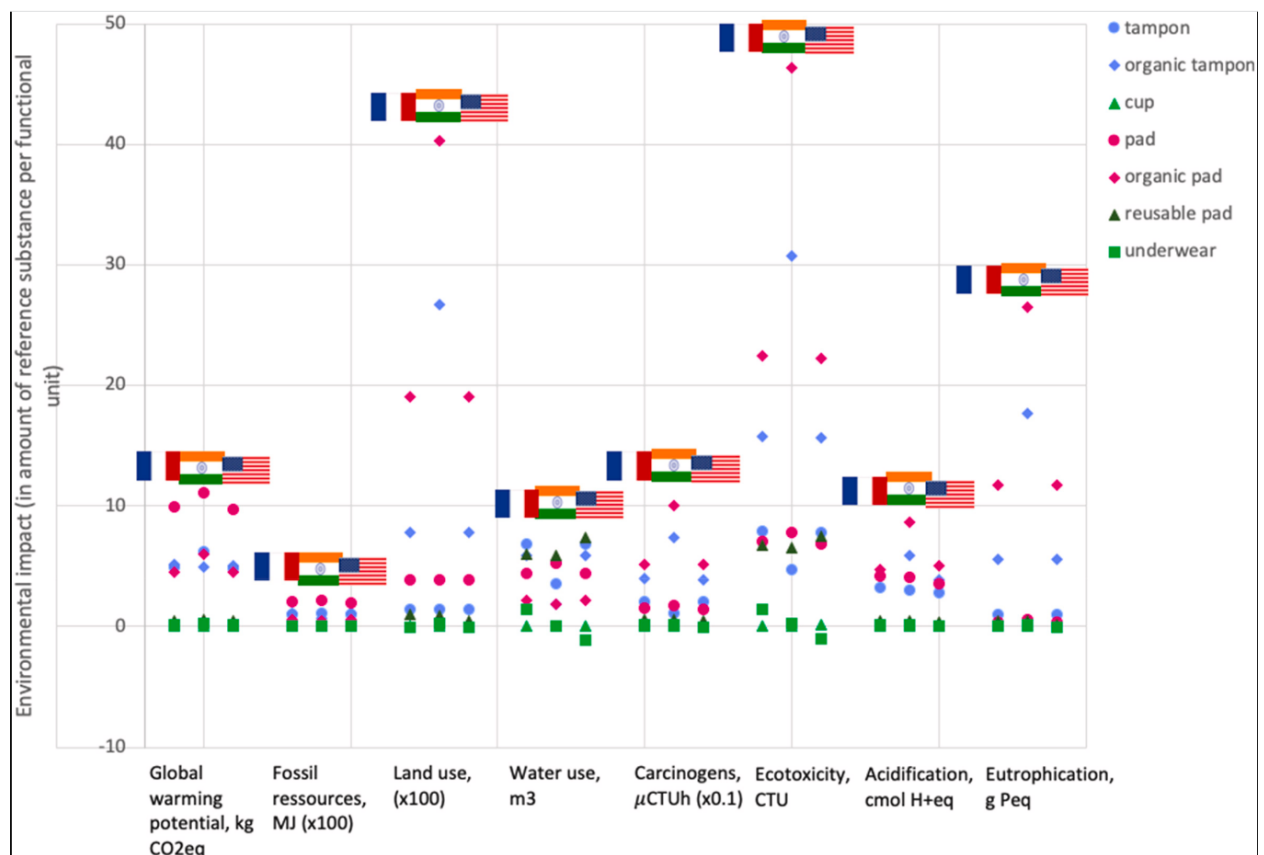
NEHA:

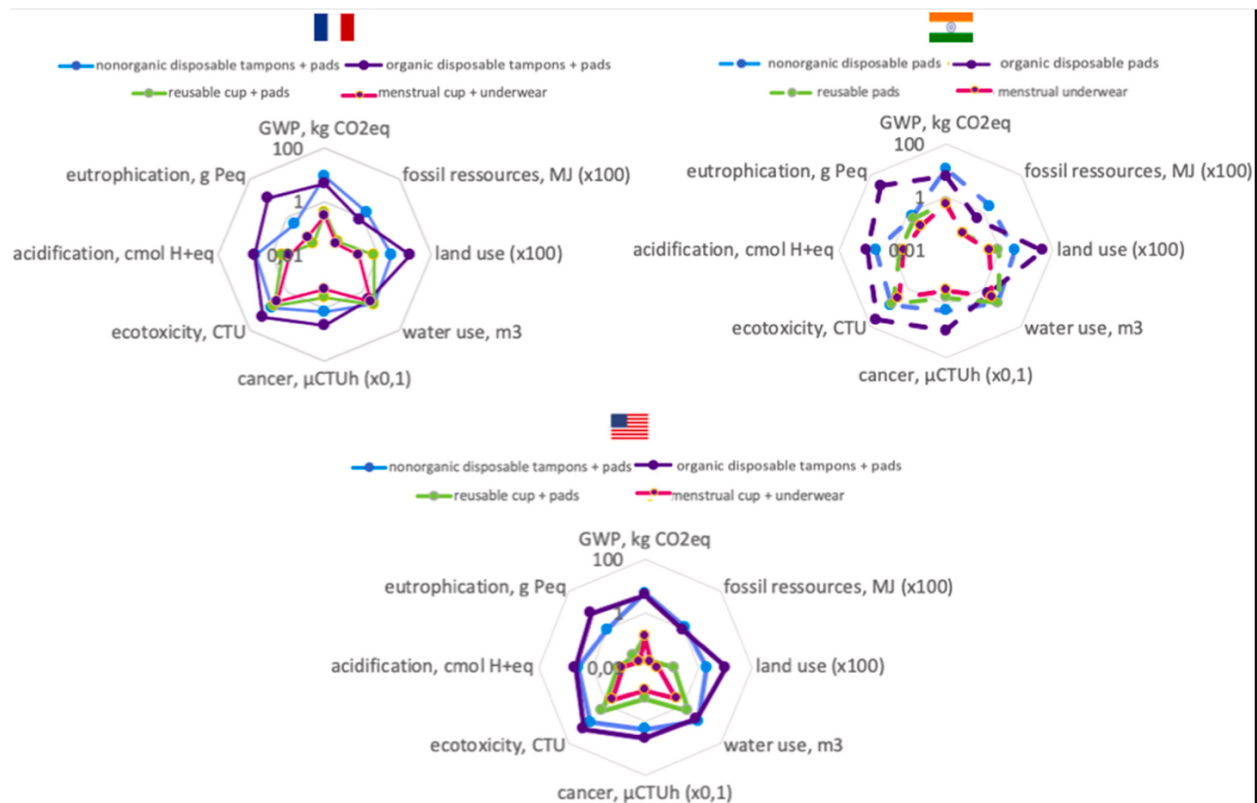


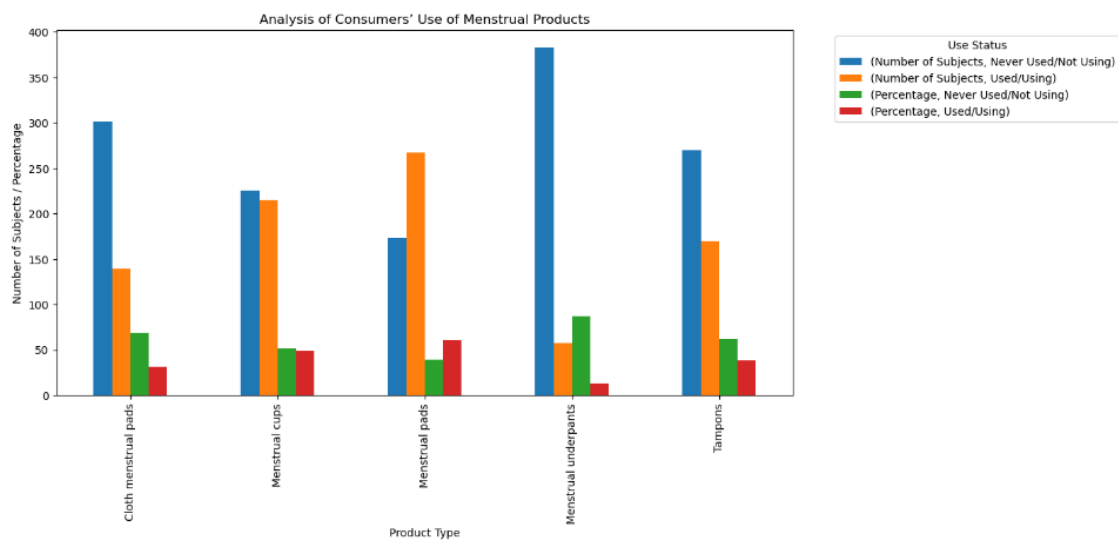
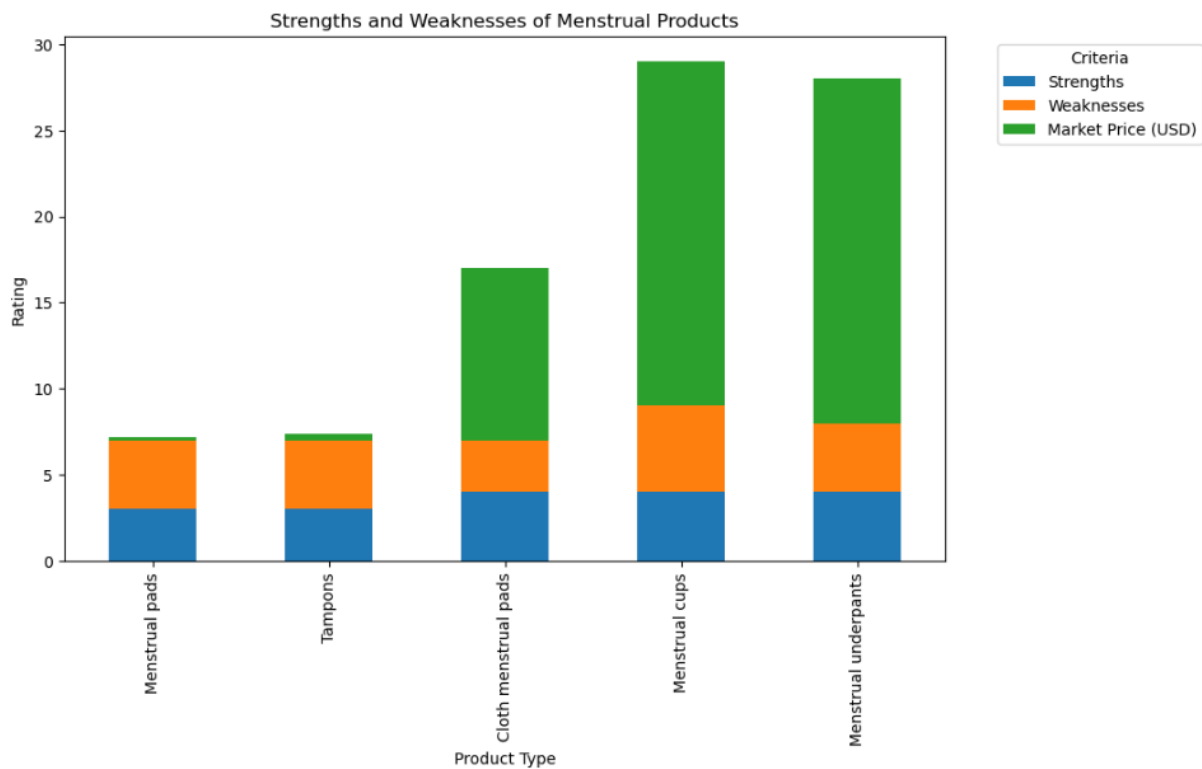
(THESE TWO VISUALIZATIONS WERE IN THE PAPER ITSELF)

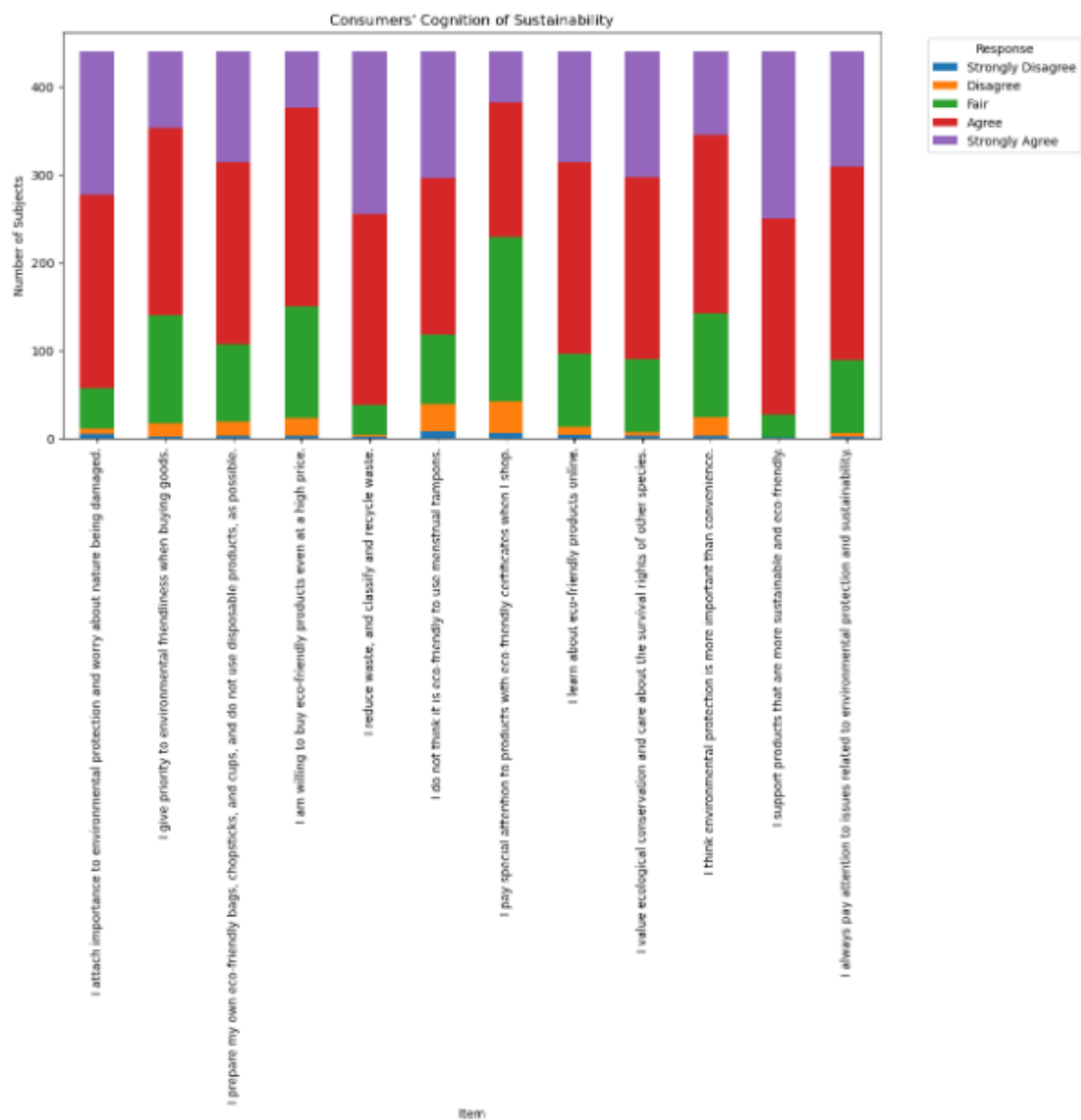
Link to the

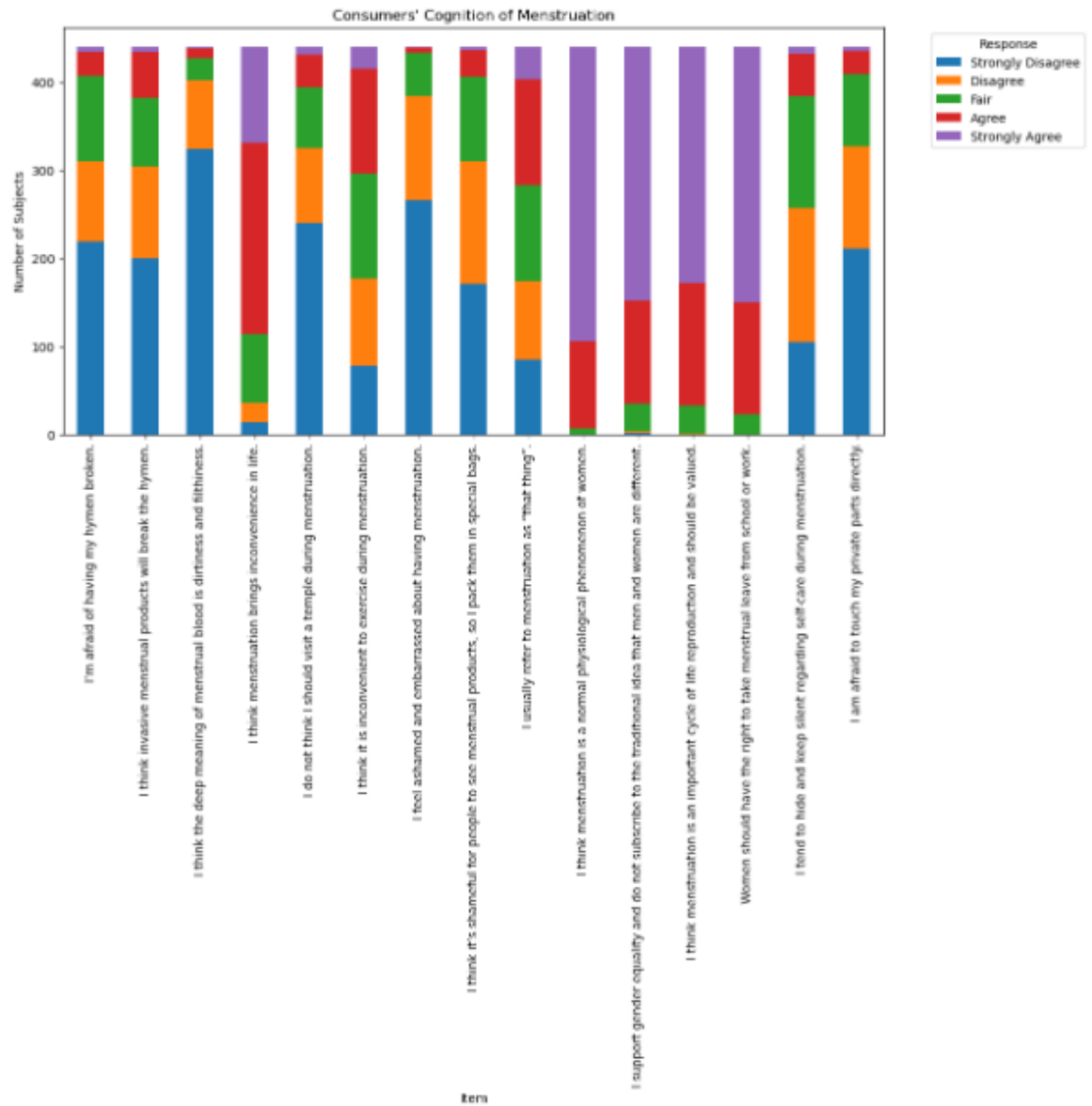
paper:<https://www.sciencedirect.com/science/article/pii/S2666789422000277#tblS1>





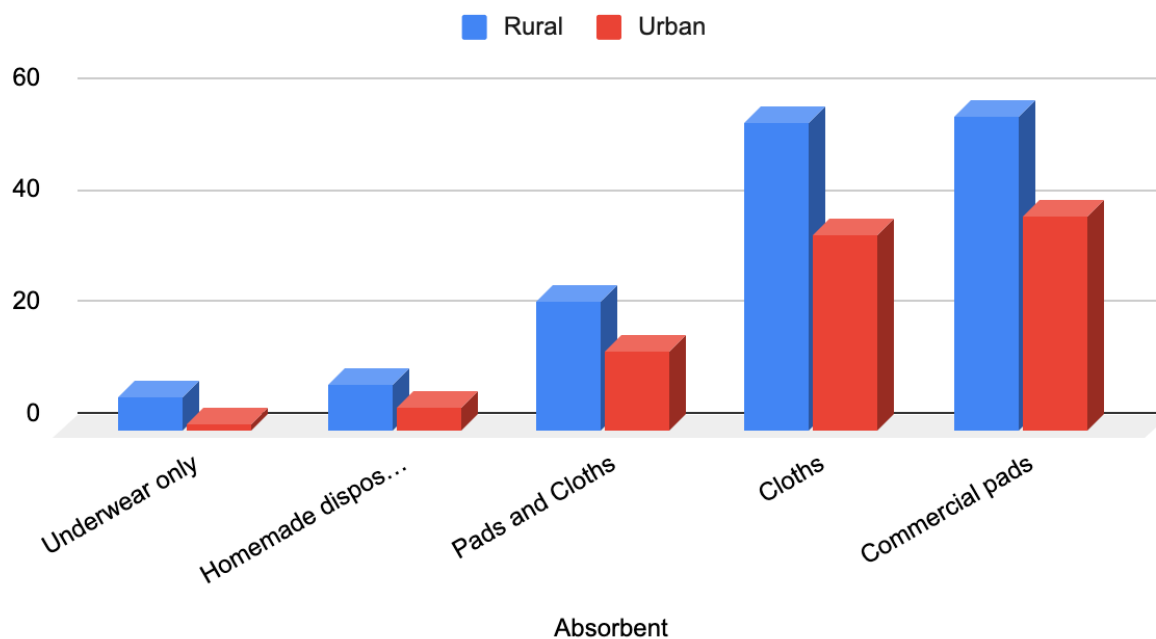




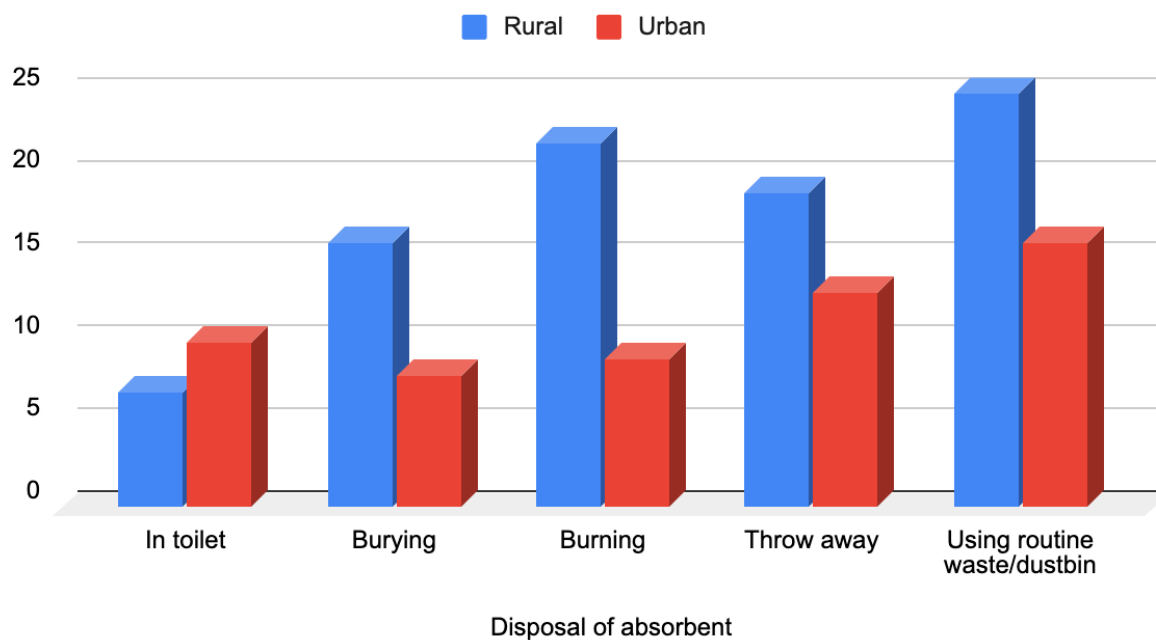


Srishti

Rural v/s Urban



Rural v/s Urban



Possible Questions:

1. Who is the target audience?
 - *People who are literate and are willing to educate the illiterate about women's health*
2. What is the impact of your study?
 - *Increase in awareness of menstrual health and waste management of the same*
3. Where did you get your datasets from?
 - *WHO, UN , Science Direct Research Papers. they are relevant, accurate and updated.*
4. How is your system different?
 - *Future scope of our project which is underwork is behavioral prediction based on our analysis to lead a social impact.*

Reference:

-

Action Items and Log

1. [03.08.23]: Data Pre-processing depending on attributes. Please mention below the methods, models and tools used.

Date	ML Developer	Changes
2023-08-20	Prutha	[Literacy: Data Cleaning] <ol style="list-style-type: none"> 1. <i>Sorted data according to sex, age</i> 2. <i>Dropped irrelevant columns</i> 3. <i>Sorted data according to locality</i> 4. <i>Normalized feature Literacy</i> 5. <i>Visualized findings (tableau)</i>
2023-08-20	Prutha	[Menstrual Waste Awareness: Data Cleaning]

		<ol style="list-style-type: none"> 1. Sorted data 2. Removed irrelevant features 3. Removed duplicates 4. Imputed missing values 5. Visualized total usage of menstrual waste per country (tableau) 6. Visualized usage by locality (excel)
2023-08-20	Srishti	<p>[Menstrual waste Disposal: Cleaning and visualization]</p> <ol style="list-style-type: none"> 1. Data Collection 2. Filtered the data 3. Sorted the data 4. Compared 5. Data Visualization
2023-08-20	Neha	

2023-08-21	Soha Srishti Neha Prutha	1. Prepared the script 2. Recorded the video
------------	-----------------------------------	---

Write down any points you wish to discuss:

- *text*

Next Meeting Agenda

1. *Shoot video*