



Group Project

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Complex Problem

1. Access to Clean Drinking Water
2. Food Insecurity and Hunger
3. Unemployment and Job Skill Gap

1. Access to Clean Drinking Water

Empathize:

- People affected: People living in rural or impoverished urban areas, especially in developing countries.
- Challenges faced: Lack of clean, safe drinking water, leading to health issues like dehydration, waterborne diseases, and even death. Many communities rely on contaminated sources like rivers or ponds.

Define:

Problem statement: Communities around the world still lack access to clean and safe drinking water, which causes preventable health problems and limits overall well-being.




Ideate:

- Develop affordable, portable water filtration systems.
- Build sustainable water purification plants.
- Install rainwater harvesting systems in rural areas.
- Create mobile water trucks that deliver clean water to remote locations.

Prototype:

- A compact water filter that can be used in homes or villages.
- A low-cost, solar-powered water purification station.
- A community rainwater harvesting setup that filters and stores water.

Test:

- Distribute water filters to a village and measure improvements in water quality and health over time.
 - Pilot a water purification plant in a local community to assess effectiveness and sustainability.
 - Install rainwater harvesting systems and track their efficiency and water collection.
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2. Food Insecurity and Hunger

Empathize:

- People affected: Low-income families, homeless individuals, children, and elderly people in underserved areas.
- Challenges faced: Many people in both developed and developing countries struggle to access enough nutritious food, leading to hunger, malnutrition, and long-term health problems.

Define:

Problem statement: A large portion of the population suffers from food insecurity due to factors such as poverty, unemployment, and food distribution inefficiencies, resulting in hunger and poor health.




Ideate:

- Develop community-based food banks and meal-sharing programs.
- Create urban farming initiatives to grow food locally in cities.
- Provide job training and financial aid programs for low-income families to buy nutritious food.
- Partner with local restaurants and supermarkets to donate excess food.

Prototype:

- A local food bank with a mobile app to connect donors and recipients.
- A community garden or rooftop farming space that provides fresh produce to residents.
- A meal-sharing app that connects volunteers with people in need for free meals.

Test:

- Launch a community food-sharing program for a small neighborhood and track participation and food distribution.
 - Test urban farming methods in different areas and measure the amount of food produced and consumed.
 - Distribute food from surplus partnerships and track reductions in food waste and hunger.
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3. Food Insecurity and Hunger

Empathize:

- People affected: Unemployed individuals, young graduates, and people with outdated skills.
- Challenges faced: Many people are unemployed because they lack the skills that the job market demands, or the jobs available don't align with their qualifications.
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Define:

Problem statement: There is a significant gap between the skills people have and the skills employers need, making it hard for individuals to find long-term employment.




Ideate:

- Offer free or low-cost skills training and upskilling programs.
- Develop online platforms for career development, including resume building and interview preparation.
- Build partnerships between tech companies and education systems to train students in the latest technologies.
- Launch apprenticeship programs that give people hands-on experience in specific fields.

Prototype:

- An online learning platform with courses in high-demand skills (e.g., coding, digital marketing).
- A virtual career counseling service offering personalized job search advice and resume workshops.
- A partnership between universities and local businesses to create internships or job shadowing opportunities.

Test:

- Run a pilot online course for a group of participants and measure their progress and job readiness after completion.
 - Offer career counseling services to a small group and gather feedback on its usefulness.
 - Start an internship program with a few businesses and evaluate how well it connects students to full-time job opportunities.
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Thank You