Waste recycling, one of the major challenge we are facing on planet earth. Many govt and non-govt organizations are working on this to solve the challenge. When we surveyed on ground for the process, most of the recycling are done either through donations or ad-hoc process. There is a missing link between end user like us and the players who work on the ground. Its a cumbersome process for the collectors or recyclers to survey the sources and for end users, they are mostly unaware of segregation process of wastes. Moreever they lack a solid motivation to recycle.

To solve this problem, we, team GreenCoders come up with a solution, WasteWhizz.

Its a marketplace for identifying the category of waste from the images user has provided, segregate accordingly and suggest a nearby recycling location and in return provide some tangible benefit (carbon credit) to the end user for the sustainability contribution.

Well that’s not all, our sustatianability champions will have the opportunity to trade their carbon credit on the platform. Do you know, how much Tesla earned from their carbon credit trading last year, its whopping 1.78 billion dollar. Its not just for the organization has the capability to trade their carbon credits, now the individuals can have the option for it and move towards carbon neutrality.

Well enough campaigns done, lets see a **quick demo** of WasteWhizz platform.

As of now we support only web application, we are coming to our mobile devices soon.

After regular authentication process, the user will have the option to upload an image of waste material he/she possess. Once the image to uploaded to the platform, it will be analyzed by our machine learning model, which was build and trained using transfer learning build using state-of-the-art VGG16 algorithm on GPUs using thousands of real images and more than that augmented images and classified into one of the 12 distinct categories. Now the user need to input the quantity of waste in possession in KGs. The platform will estimate the amount of carbon credits will be awarded to the user based on the calculation made by our in-house algorithm. We are considering many parameters for this algorithm in future.

Now the user has the option to find nearby recycling providers or collectors based on the category of waste using google maps and take appropriate action.

And the trading platform can be accessed by clicking the “User Trade” button. It will redirect the user to the personal dashboard with trading platform. Here the user can exercise the Buy or Sell option for their carbon credit. We aim to make the carbon credit trading platform realtime in future with seamless experience.

Waste is not just a waste now, its an asset and we are responsible for this.

**From technology point of view**, we have used Django and bootstrap for preparing the frontend and various APIs which interact between different components. And for machine learning, transfer learning was used on top of VGG16.

Add the pic here in video.

**Future prospects** of this project is to enable the platform with real-time motivations, experiences in recycling and carbon trading with a scalable solution beyond boundaries and borders. Overall, its one planet, one solution.

Our goal is to make every person on this planet to be carbon neutral and maintain the momentum of sustainability. Do you want to join our journey, join WasteWhizz.

================================

Waste recycling, a pressing challenge on our planet. Government and non-governmental organizations tirelessly work to address this issue. However, when we conducted on-site research, we found that most recycling efforts are fragmented, relying on donations or ad-hoc methods. There's a critical disconnect between end-users like us and the individuals working on the ground. Collectors and recyclers struggle to identify sources, while end-users often lack knowledge about proper waste segregation and motivation to recycle.

In response to this challenge, we, the GreenCoders team, have developed a solution - WasteWhizz.

WasteWhizz is a unique marketplace that identifies waste categories from user-provided images, segregates them, suggests nearby recycling centers, and rewards end-users with tangible benefits, such as carbon credits, for their contributions to sustainability.

But that's not all. Our sustainability champions will have the opportunity to trade their carbon credits on the platform. Consider this: Tesla earned a staggering $1.78 billion from carbon credit trading last year. It's not just for organizations; individuals can now move toward carbon neutrality by trading their credits.

Enough talk; let's dive into a quick demo of the WasteWhizz platform.

Currently, we support web applications, with mobile apps in the pipeline. After the standard authentication process, users can upload an image of the waste material they possess. Our machine learning model, trained using state-of-the-art VGG16 algorithm on GPUs and thousands of real and augmented images, classifies the waste into one of 12 distinct categories. Users can input the quantity of waste in kilograms, and the platform estimates the carbon credits awarded using our in-house algorithm.

The user can then locate nearby recycling providers or collectors based on the waste category using Google Maps and take appropriate action.

To access the trading platform, simply click the "User Trade" button. It will take you to the personal dashboard with the trading platform, which we aim to make real-time for a seamless experience in the future.

Waste is no longer just waste; it's an asset, and we're all responsible for it.

From a technology perspective, we've utilized Django, Bootstrap for the frontend, and various APIs to connect different components. Machine learning-wise, we've employed transfer learning on top of VGG16.

Looking ahead, our project aims to provide real-time motivation, immersive recycling experiences, and borderless, scalable solutions. Remember, it's one planet, one solution.

Our goal is to make every person on this planet carbon-neutral, maintaining the momentum of sustainability. Are you ready to join our journey? Join WasteWhizz.