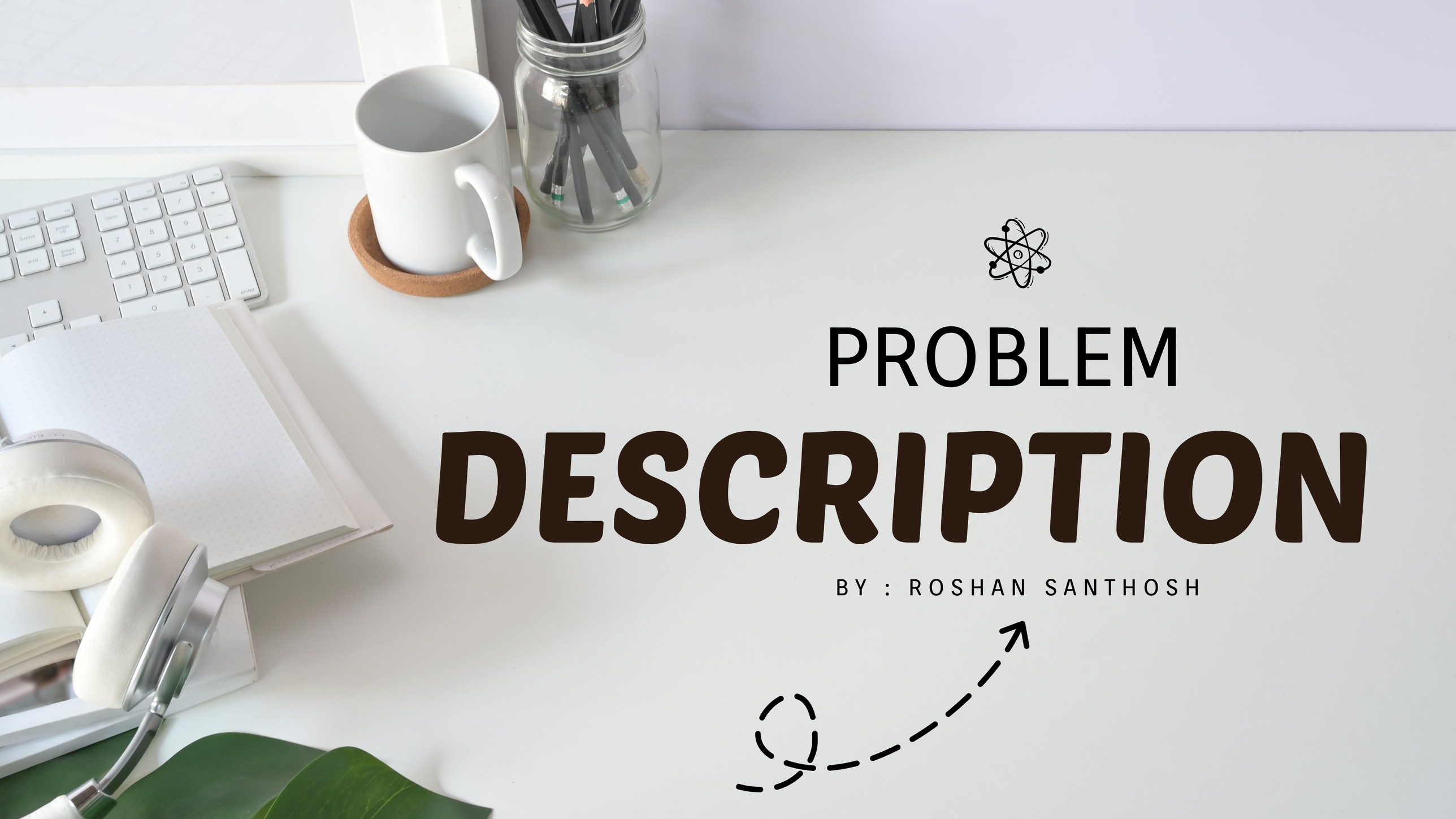
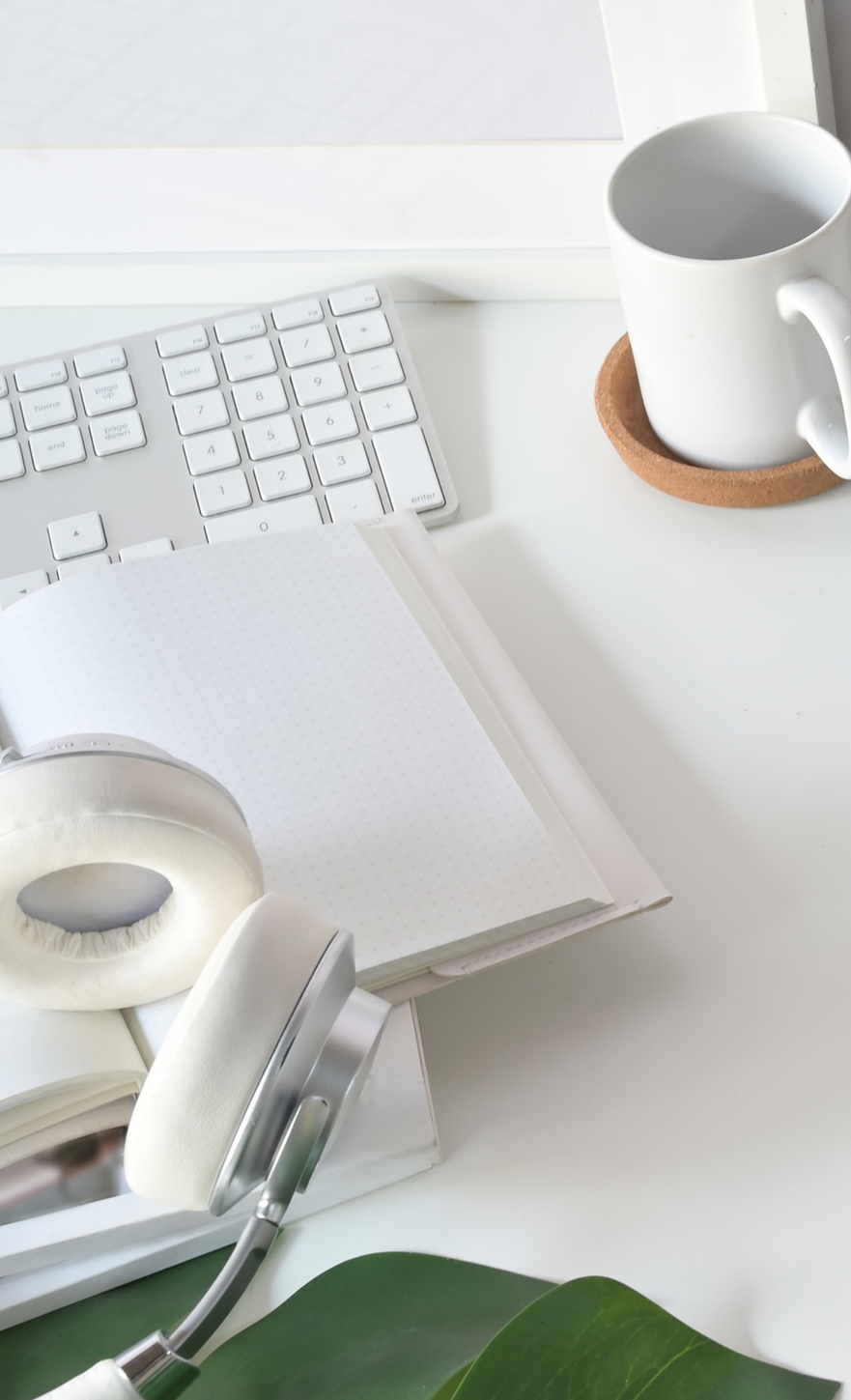


PROBLEM

DESCRIPTION

BY : ROSHAN SANTHOSH

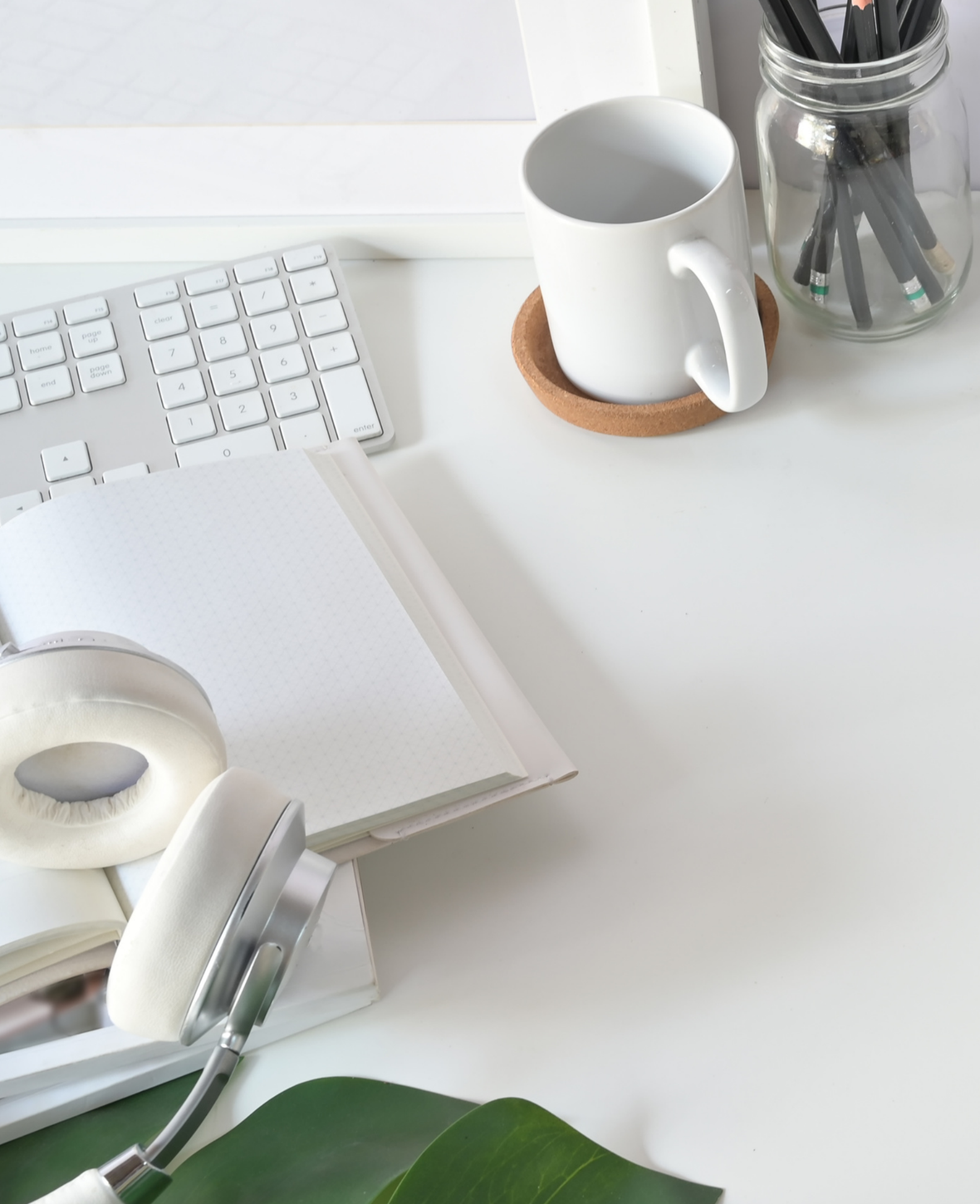


PROBLEM STATEMENT

Student Innovation

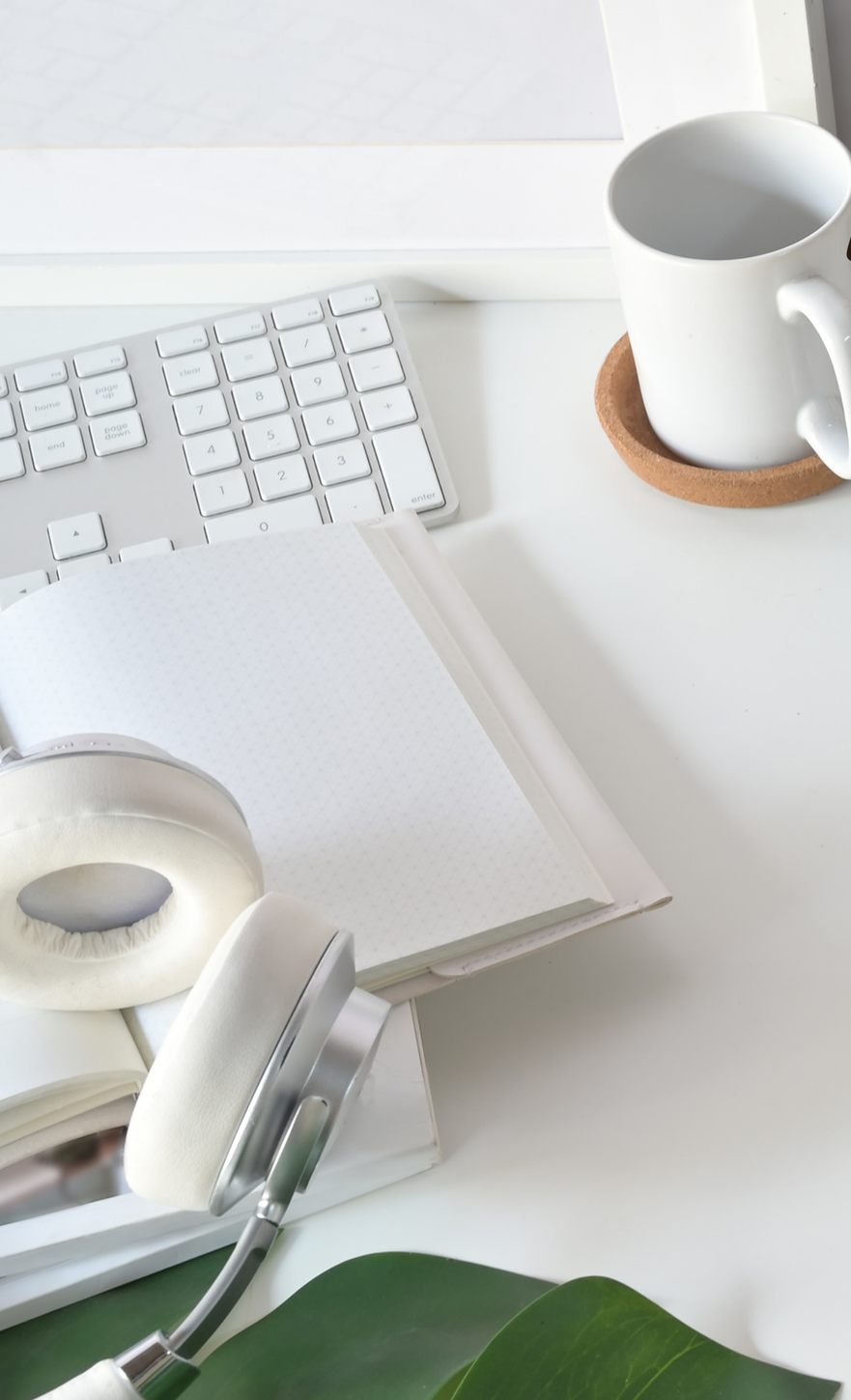
DESCRIPTION

Ideas focused on the intelligent use of resources for transforming and advancements of technology with combining the artificial intelligence to explore more various sources and get valuable insights.



EXPLANATION

- Automated sorting and separation
- Design optimization
- Waste tracking
- Demand forecasting



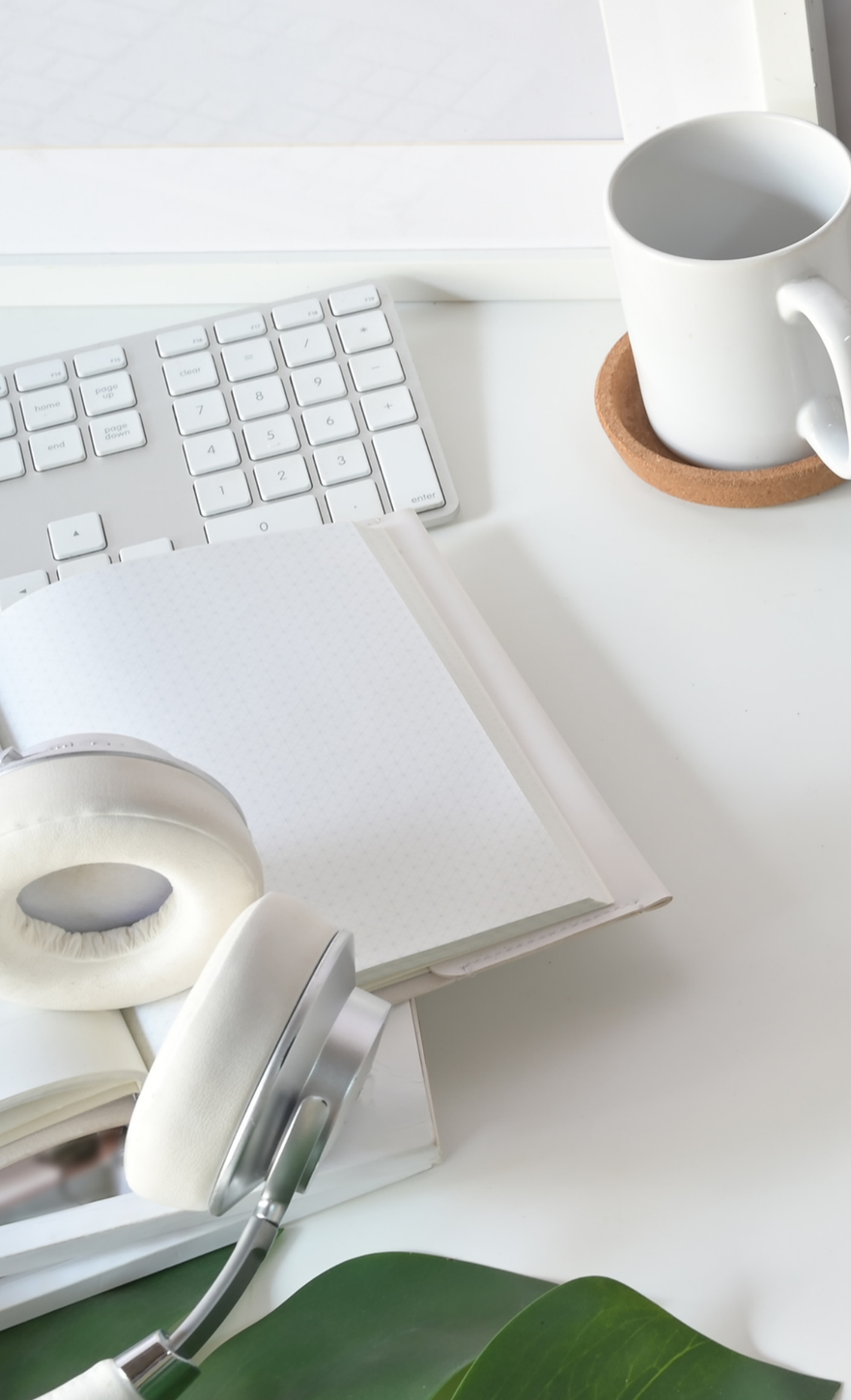
AUTOMATED SORTING AND SEPARATION

AI can be used to identify different types of materials in waste streams using computer vision and machine learning algorithms. This can be done by analyzing the shape, color, and texture of objects. Once the materials have been identified, they can be sorted and separated automatically, which can increase the recovery of valuable materials, reduce contamination, and improve the efficiency of recycling processes.

EXAMPLE

greyparrot

Greyparrot uses AI to identify different types of waste materials in real time using its AI Waste Recognition System. The system is deployed on moving conveyor belts at waste and recycling facilities around the world. It can monitor 100% of waste in-feed and provide instant live-data on the material composition, packaging information and brand/SKUs. This information can be used by waste managers to improve the sorting process and increase the amount of recycled materials.

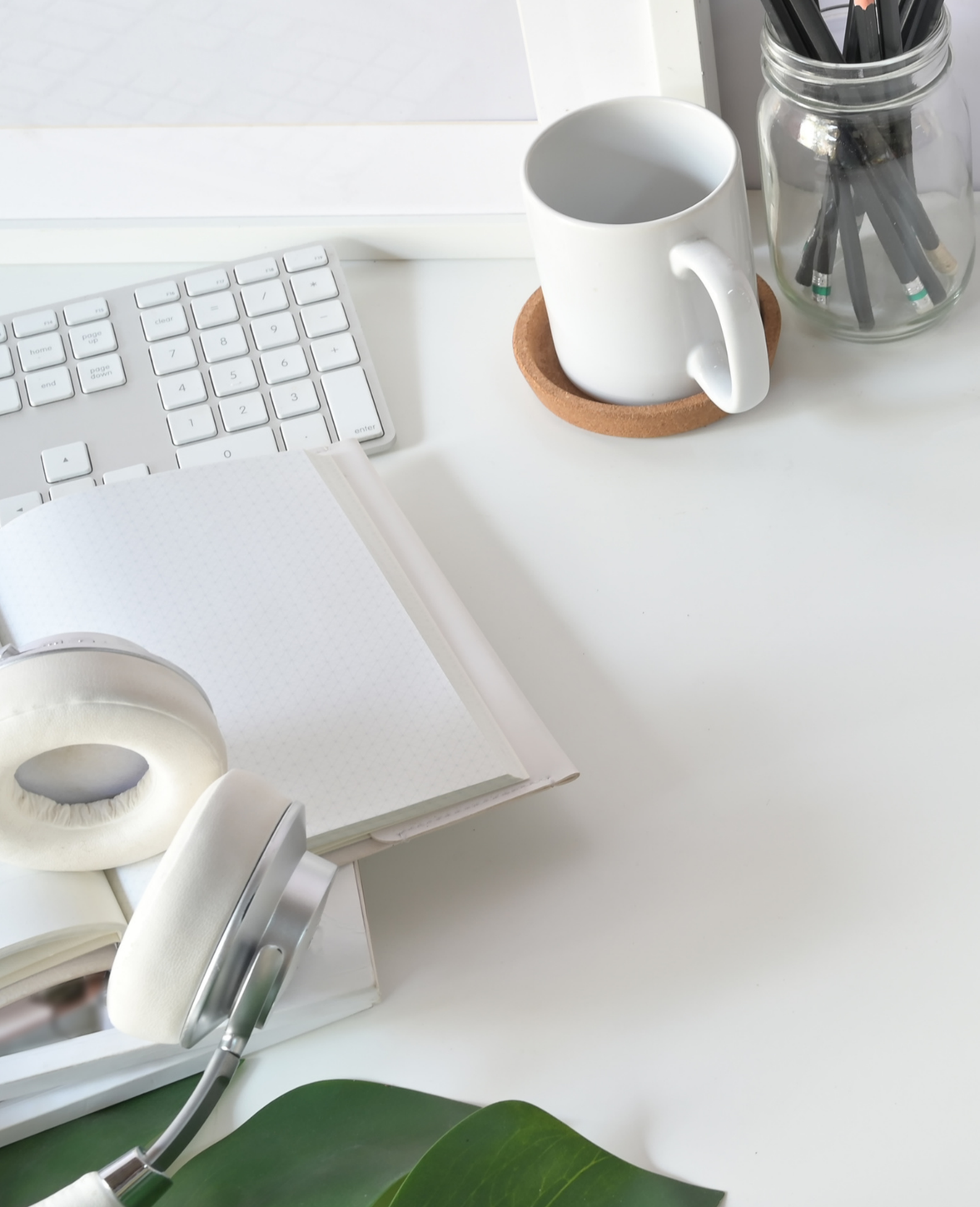


DESIGN OPTIMIZATION

AI can be used to help manufacturers design more recyclable products. This can be done by analyzing the composition of products and identifying materials that are difficult to recycle. Manufacturers can then use this information to design products that are easier to recycle and that contain less of these materials.

EXAMPLE

Upcycled Materials uses AI to design and manufacture new products from recycled materials. The company's AI-powered platform analyzes the composition of waste materials and identifies the most valuable materials. This information is then used to design new products that are made from these materials. This helps to create a market for recycled materials and encourage more recycling.

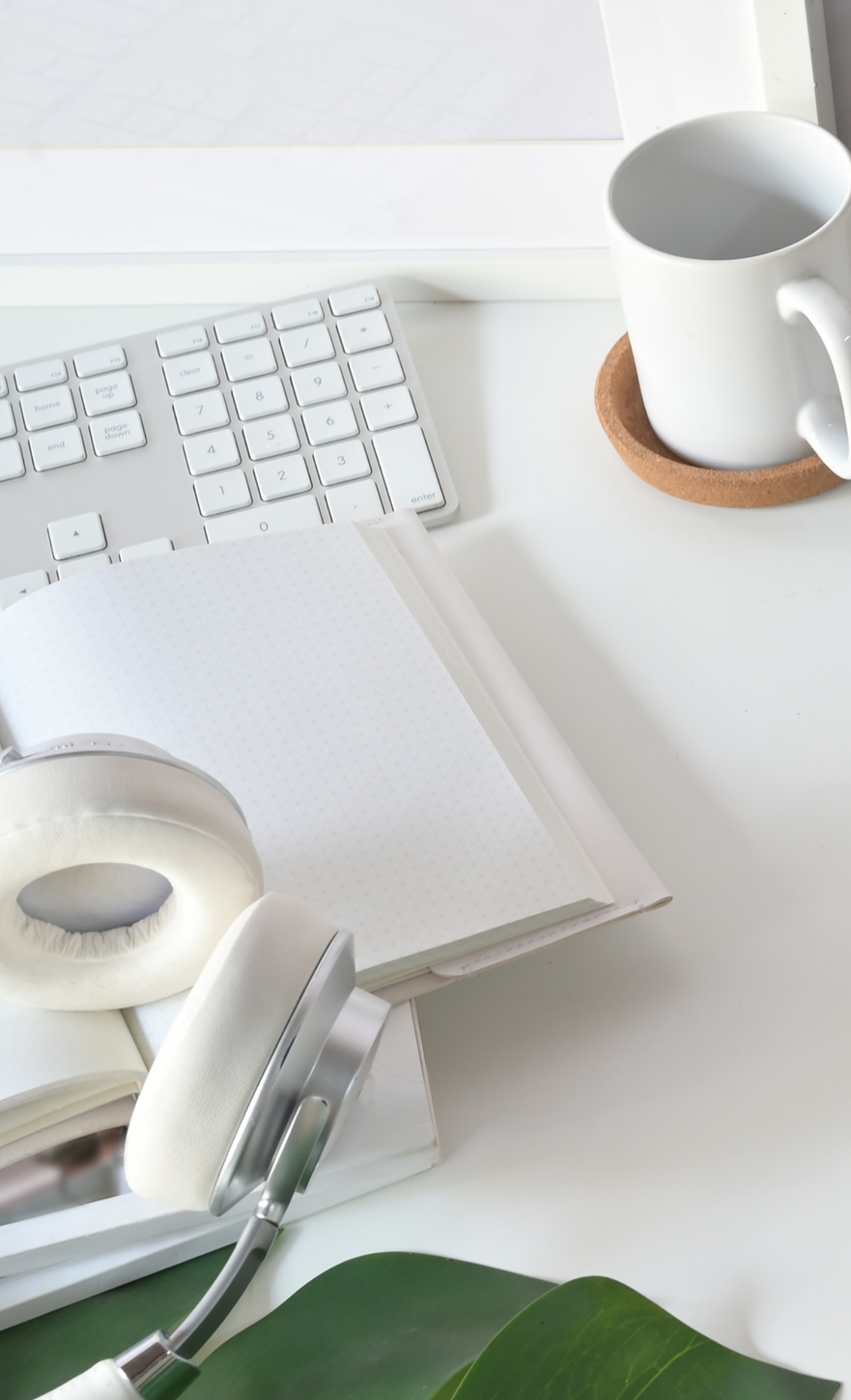


WASTE TRACKING

AI can be used to track the movement of waste through the recycling system. This can be done by using sensors and RFID tags to track the location of waste materials. This information can be used to identify inefficiencies in the recycling system and to make improvements.

EXAMPLE

EverestLabs uses AI to track the movement of waste through the recycling system using its AI-powered waste tracking platform. The platform uses sensors and RFID tags to track the location of waste materials in real time. This information is then used to identify inefficiencies in the recycling system and to make improvements.

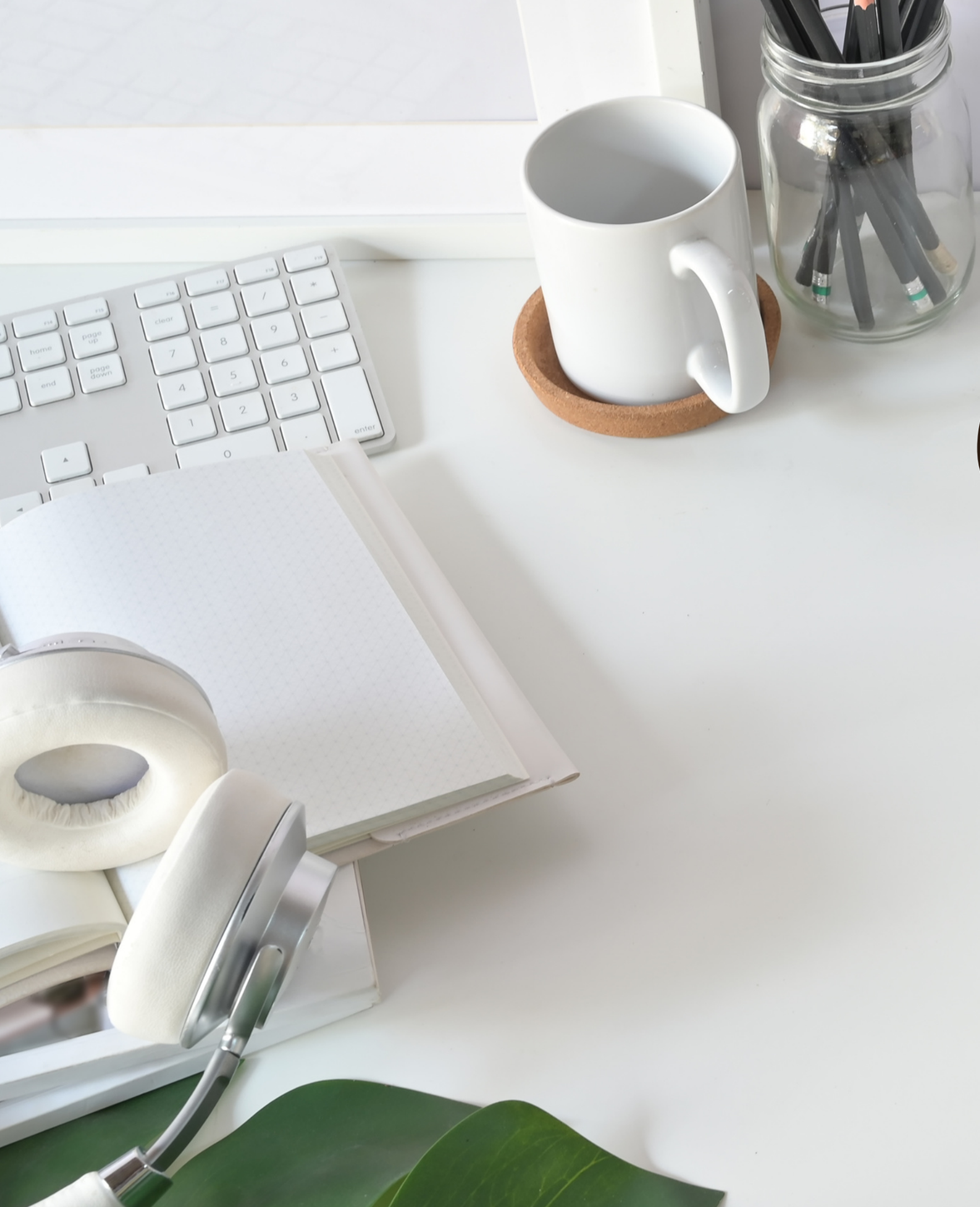


DEMAND FORECASTING

AI can be used to forecast the demand for recycled materials. This can be done by analyzing historical data on the demand for recycled materials and by using economic models to predict future demand. This information can be used to ensure that there is a market for recycled materials, which can in turn encourage more recycling.

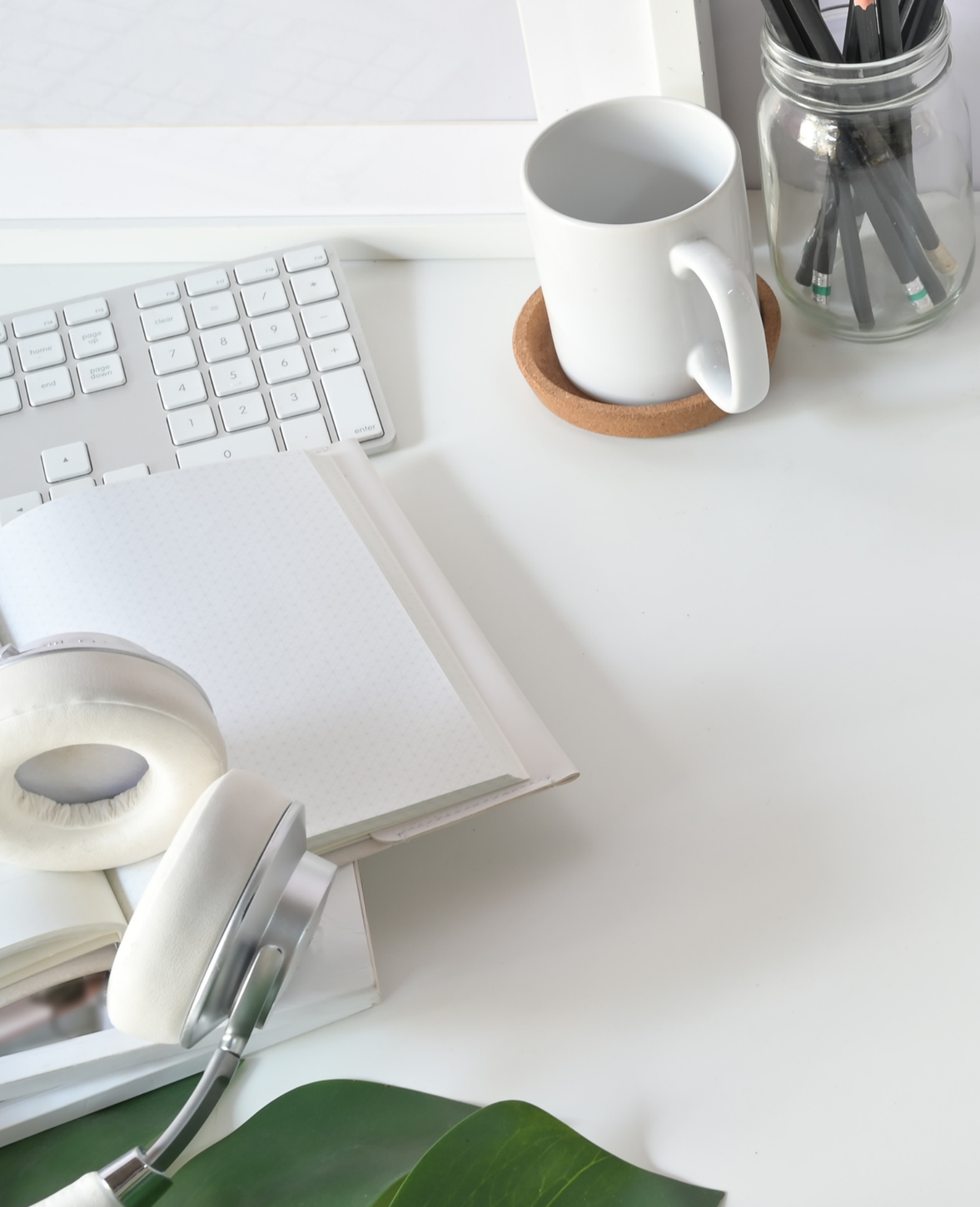
EXAMPLE

Closed Loop Partners uses AI to forecast the demand for recycled materials using its AI-powered demand forecasting platform. The platform uses historical data on the demand for recycled materials and economic models to predict future demand. This information is then used to help businesses make decisions about how to source and use recycled materials.



CONCLUTION

These are just a few examples of how AI is being used to improve the recycling process. As AI technology continues to develop, we can expect to see even more innovative and effective ways to use AI to improve recycling.



THANK YOU