

# UDYAM 4.0 Smart Manufacturing Forum

**Enabled Gurukrupa Exports to work with AugurAI and deploy AI based image mapping solution**

## About Gurukrupa Exports

Gurukrupa Exports is a leading manufacturer of Gold and Diamond Jewelry in India since 1962. They supply high-quality diamond jewelry to leading jewelry merchants in India and abroad. With an eye on quality and superior designs, Gurukrupa Exports has invested heavily in state-of-the-art equipment to support their traditional experience in Jewelry making. Gurukrupa Exports wanted to leverage digital technologies to improve user experience as well as improve productivity in jewelry manufacturing.

## Problem Statement

Customized Jewelry was the key requirement that buyers were asking for, but this made the manufacturing process very complex and time-consuming. For each customer design, the team had to manually search through thousands of CAD design files to find a match, if one existed. This process was labor-intensive for the design team and resulted in increased costs and longer time-to-market.

## The Solution Concept

AugurAI's team, with a focus on jewelry shape being the top priority for Gurukrupa Exports, developed an AI-powered computer vision model to extract shapes from both user and CAD images. The color and shape of the jewelry were used as the criteria to match and choose the best design. A deep learning algorithm was employed to construct a recommendation system that identifies the ideal CAD design file match.

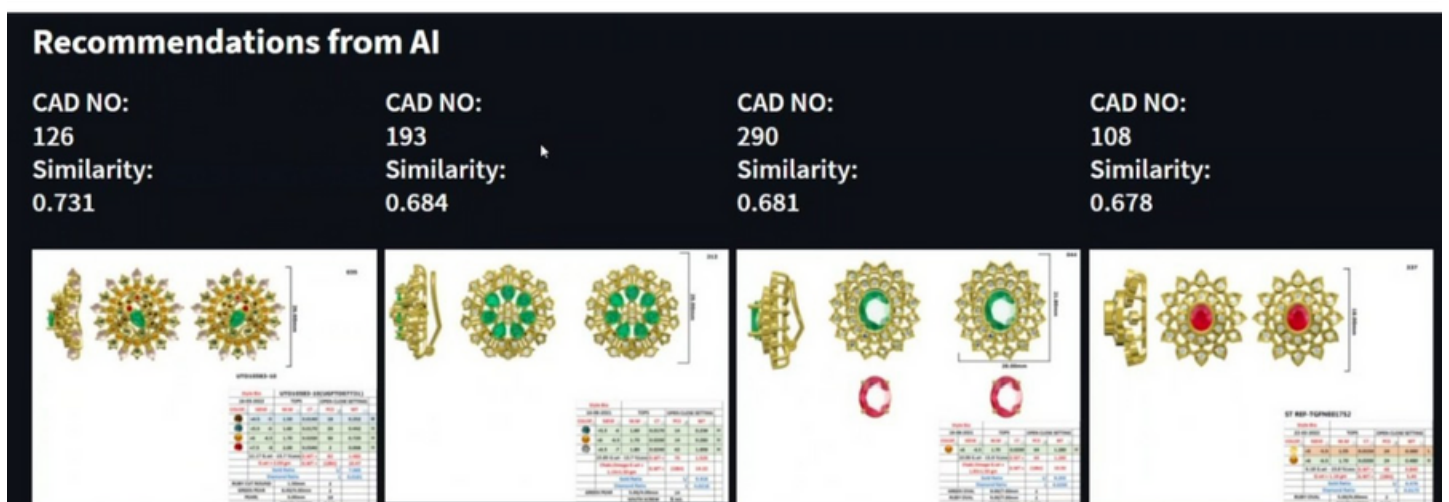
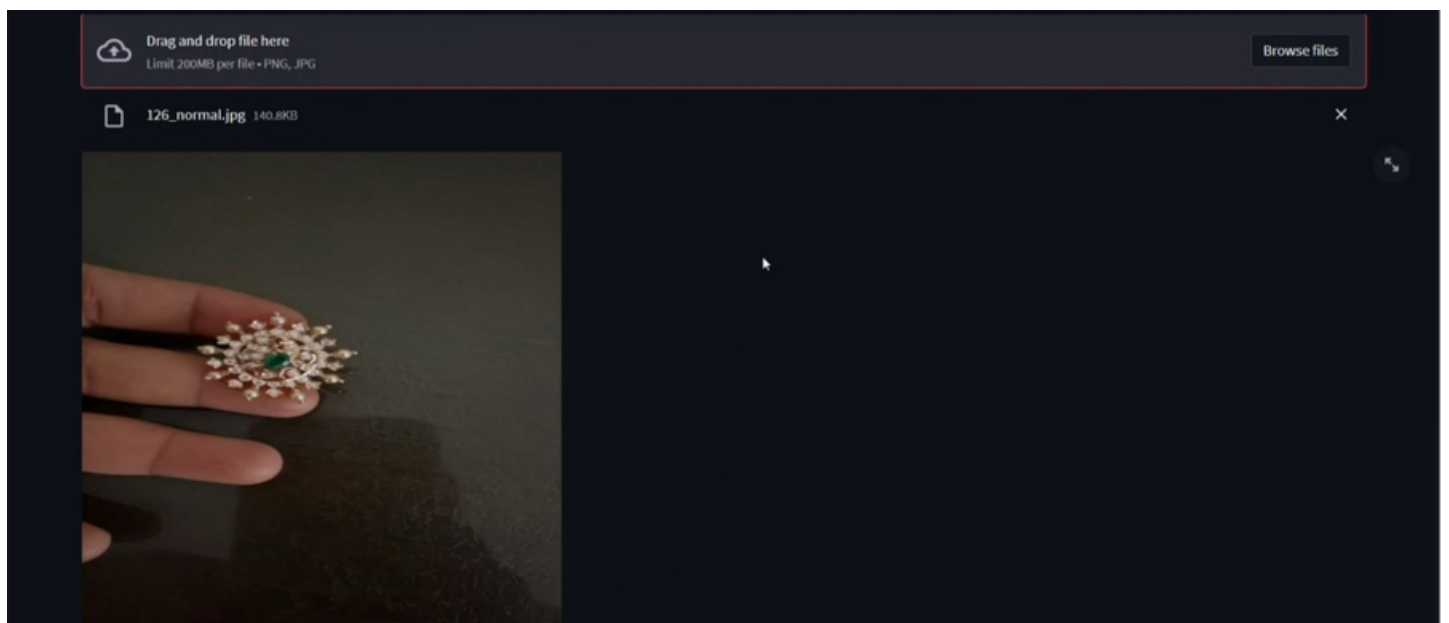
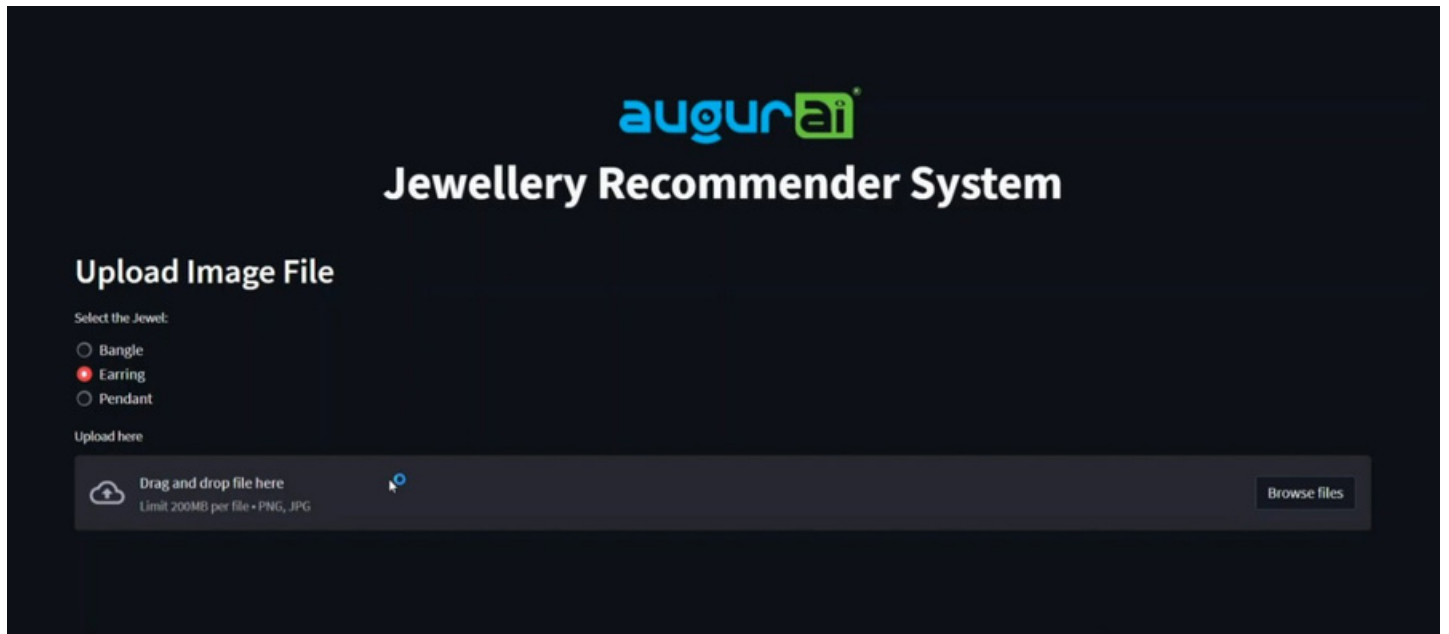
## Role of NASSCOM CoE

NASSCOM CoE, Gandhinagar team visited the Jewelry manufacturing plant of Guru Krupa Exports and proposed an AI-based image mapping solution to help the design team reduce manual efforts of finding the best match existing CAD design file. CoE team helped Gurukrupa Exports to frame use case requirements and monitored the solution-building process to ensure it gets made as per requirement. The CoE team also introduced Gurukrupa to Augur AI- CoE incubated startup to work on the solution. To ensure smooth execution, CoE team consistently mentored the startup on building the solution approach

## Business Impact

- The solution provided the top 5 design recommendations with an accuracy of over 80%.
- Solution in the first phase was developed for a set of three jewelry types (Bangles, Earrings, and Pendant) which will reduce design search time by over 60% for the Gurukrupa Exports thereby improving the productivity and time to market.

## Solution Screenshots



NASSCOM CoE is a digital India initiative from Ministry of Electronics and IT and Government of Gujarat created to build an ecosystem for manufacturing digitisation in the country.

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