

OBJECT SHAPE DETECTION USING CNN

By,
Final Project 7



BUSINESS CASE

Shape detection for objects is an area that does not seem to have many real-world applications but is a topic that is important enough to be taught to children.

Some of the niche applications of shape detection would be in manufacturing processes (for quality checks, etc.) and developing bionic arms.

Understanding the shape of an object can be beneficial in those scenarios. Therefore, for this project, we decided to take on the challenge of detecting 2D shapes of common and uncommon objects.



Technologies Used

- Heroku: Model Deployment
- Python
- Machine learning libraries: TensorFlow 2.x, Scikit-learn, Pandas
- HTML/CSS/JavaScript for building the browser extension
- Git and GitHub for code management and version control.

Solution Development: Data, Model and Deployment

- Data Collection
- Model Training and Evaluation
- Model Deployment with Heroku



Results – Simple Demo

<https://object-detection-aidi2004.herokuapp.com/>

FUTURE CHALLENGES

More data, better accuracy?

Cleaner data, better accuracy.

A simpler model could improve the accuracy.

Along with 2D shapes, we can improvise the model by feeding 3D shape object which helps to predict objects easily.



Thank you!

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