

A close-up, high-angle shot of a silver, metallic robotic hand. The hand is positioned in the center of the page, reaching towards the top left. It has a complex, articulated design with visible joints and sensors. The background behind the hand is a light blue gradient with a faint digital pattern of glowing lines and nodes.

## Package Management Using OCR

### i Introduction

We all are living lives bounded by the shackles of time. Hence everyone seeks for a way to get the maximum output from a given time period. Even the employers don't want their employees to keep performing a repetitive task which can be replaced by a machine. Similar problem was identified by the building managers of huge residential towers, where package management was a tedious and chaotic task for the receptionists.



This case study showcases how Winjit's Machine Vision was installed in a residential tower, enabling the managers to serve more than thousands of residents by managing their packages.



### Customer

The client, empowers management to run their buildings easily and transparently, enables staff to handle their myriad day-to-day tasks seamlessly and accurately, helps foster a sense of community among his residents, and enhances its building's or company's unique brand identity.

The organization offers choice for property managers looking to upgrade the total experience of managing, working at, or living in their luxury residential properties. Their current web-based platform is used in over 3,000+ properties in the U.S. and worldwide.

Even after adapting various technologies, the client couldn't provide much features to ease the work of receptionists at the buildings. Hence a solution is required to lessen the hurdles of building managers and to provide them with better package management.



## Requirement

To get the overall view of the scenario, Winjit Technologies MV team communicated with the client to understand the exact requirements. The team identified the key requirements as:

- ▶ Creating database of all the logistic companies with the recipients in the building
- ▶ Creating a database of the contact details of the recipients
- ▶ Integrating MV with the database created
- ▶ OCR was used for data acquisition
- ▶ Smart notification system for the recipients



## Challenges

The client manages more than 3000 corporate properties in the U.S.A and worldwide. The receptionist at most of the buildings receive more than one lakh parcels for the recipients in the building, in a month.

Updating the details of every parcel either manually or typing it in the system, makes this an onerous job for the person.

Also, updating each concerned person with the parcel/package received increases the work of the building manager or receptionist.



## Solution

Machine vision for smart building management was achieved by the Winjit MV team with the value addition of linking SMS alerts with the designed system.

For the data acquisition from the package, the following component- Camera, Led lamp, system with i5 processor, 8GB Ram and 1TB HDD, were the preferred solution for implementation.

A dedicated algorithm was made for data acquisition. General cases were studied to find what are different formats used by various logistics companies on their labels. Keeping that in mind, the algorithm was designed.

The solution comprised of defining mini frames in a still frame, which extracted the following information- sender's details, receiver's details, supplier's details, logistics details, etc. All the information was classified based on the labels created in the data base.

As soon as the package was scanned by the camera, an SMS alert was generated at the concerned receiver's end, making him aware that a package delivered for him is there in the premises.



## Achievements & Benefits

- ▶ Time management of receptionists increased significantly.
- ▶ Time taken to scan a package and update its details reduced by more than 95%.
- ▶ SMS alerts were sent to the recipients to make them aware that they have received a parcel/package.
- ▶ The same system was proposed for their inventory management as well.



## Conclusion

The solution helped the client with better management of the packages arriving at the building. This led to efficient usage of time, allowing the receptionists and managers to pick up other tasks as well.

Winjit technology is India's leading provider of innovative engineering solutions. Since its inception in 2004, Winjit has built and expanded its expertise in latest trending technologies including Internet of Thing, Artificial Intelligence & Machine Learning, Fintech Solutions, Product engineering and Digital publishing. Winjit provides end-to-end solutions from conceptualization and optimization to providing real-time solutions by developing software systems for any business in these fortes. Over the past decade, Winjit has provided innovative technology and engineering solutions that has resulted in world-class recognition and long standing customers.



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