

## Buy2Sell Project Overview

Buy2Sell specializes in the processing, registration, and resale of both new and used industrial electronic equipment. Before any product can enter our inventory, several key fields must be filled in our internal system, such as:

- Manufacturer
- Product type / model
- Item category
- Condition
- Country of origin

At the moment, all information is entered manually by our staff.

## Current Challenge

Although the registration interface requires many details, most of this information already is on the product labels provided by manufacturers. These labels normally include:

- Model number / type
- Serial number
- Manufacturing details
- Technical specifications
- Barcodes

Because of this, a large amount of time is spent transferring information from the label into the system by hand, which slows down the workflow and increases the risk of typing errors.

## Project Idea

We would like students to explore the possibility of developing an AI-based solution using **computer vision, OCR (Optical Character Recognition)**, and potentially **agentic AI** to automate this process.

The goal is to create a system that can:

1. **Scan the product label** using a phone or camera
2. **Recognize text and barcodes**
3. **Automatically extract relevant information** such as model, type and manufacturer
4. **Populate the corresponding fields in our registration system** without any manual input

This would greatly reduce the time needed to register each item, minimize human errors, and make the workflow more efficient and consistent.

## Why This Project Is Valuable for Students

- Hands-on experience with real-world AI and machine learning applications
- Integration of computer vision, OCR, barcode reading, and data processing
- Clear and measurable outcome: significantly reduced registration time per product
- Opportunity to work with real business processes, systems, and datasets
- Possibility to experiment with **AI models** that autonomously analyze, decide, and complete actions

## What We Provide

- Access to example product data and system requirements
- Documentation of the registration process
- Ongoing support from our team, ready to answer any questions throughout the project
- Possibility to visit our company and explore ideas on-site

We believe this concept offers both practical value for our business and an exciting technical challenge for software engineering students. We would be very happy to collaborate with a student group interested in working on this project.

Please feel free to contact us if you need any additional information.

We look forward to the possibility of working together.

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