Senior Design Team Contract Draft

Team Name: SSA

Project Summary:

The senior design project is focused on creating an AI-powered inventory management system that integrates deep learning concepts for image recognition with a backend database for automated inventory tracking. The system allows real time-addition, removal, item monitoring while also providing a user friendly dashboard for inventory visualization and alerts for low stock.

Problem Statement:

Efficient inventory management is of big importance for warehouses, retail stores or laboratories. Organizations normally rely on manual or semi-automated spreadsheets which is time consuming, have inconsistencies and delays in reporting.

Solution:

The AI-powered inventory management system leverages deep learning for image and pattern recognition to track and modify stock items. The automation reduces human error, is less time consuming and will be able to provide actionable insights about the inventory.

Advisor:

* Name: TBD
* Email: TBD

Contact Information:

* Saugat Neupane - Email: neupansa@mail.uc.edu
* Sabal Dahal - Email: dahalsl@mail.uc.edu
* Aayush Pokhrel - Email: [pokhreah@mail.uc.edu](mailto:pokhreah@mail.uc.edu)

Responsibilities :

* ML/DL Development for image recognition, model training: **Sabal**
* Backend/ Database management: **Aayush**
* Frontend/UI for dashboard design and visualization: **Saugat**

Technical Stack:

* ML/DL: Python with TensorFlow, PyTorch, Scikit-learn,
* Database and Backend: PostgreSQL/MySQL, Node.js
* Frontend/Dashboard: [React.js](http://react.js), Tailwind CSS

Team Meetings:

* Frequency: 2 times a week
* Timing: 6pm Monday and Friday
* Location: Zoom/In Person

Team Signatures(Initials):

Saugat Neupane(SN) Sabal Dahal(SD) Aayush Pokhrel(AP)

Date: 9/15/2025

Advisor Signature(Initials):  
TBD