



ISSA Feeda

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General Business Case

ISSA Feeda addresses key gaps in portion control and food safety by delivering a weight-based, UV-sanitized automatic pet feeder. Targeting health-conscious pet owners in a large and growing market, the product is competitively priced below premium alternatives while offering superior functionality. Revenue is driven by hardware sales with future subscription potential, and the go-to-market strategy focuses on direct-to-consumer channels and retail partnerships, with scalability into additional pet segments.

Introduction and Background

ISSA Feeda is an automated pet feeder that improves accuracy and food safety using weight-based dispensing and UV-C–sanitized storage. It eliminates the portion errors and contamination risks common in time-based feeders, providing a more reliable and healthier feeding solution.

Time-based feeders → inaccurate portions

Overfeeding and underfeeding risks

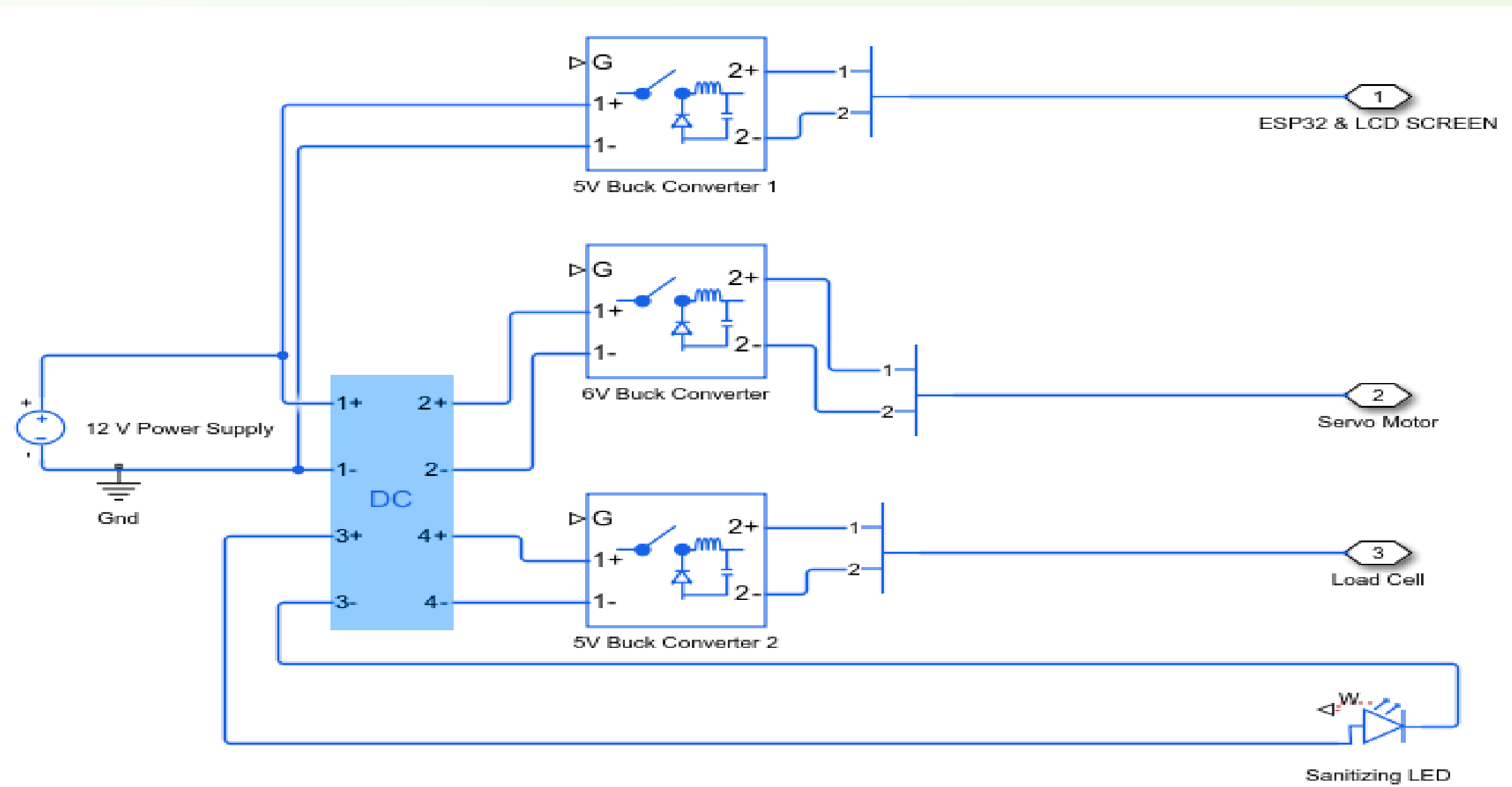
Poor storage → mold and bacteria

ISSA Feeda provides:

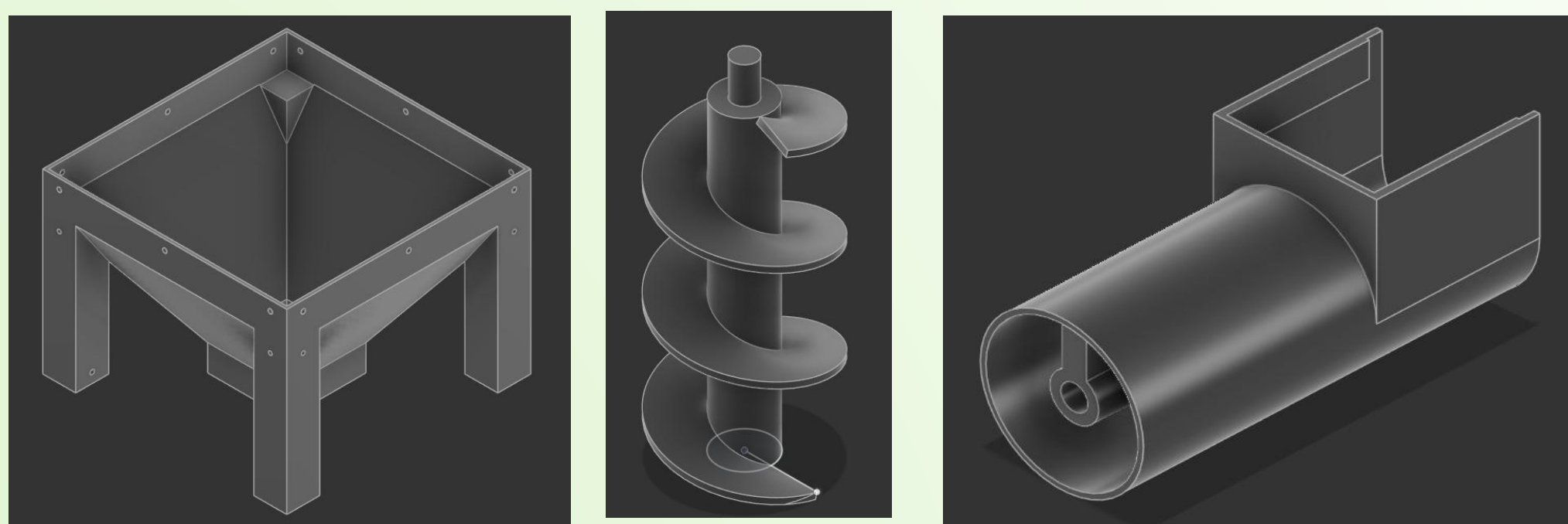
Weight-based feeding (high accuracy)

UV-C sanitation for safer storage

System Design



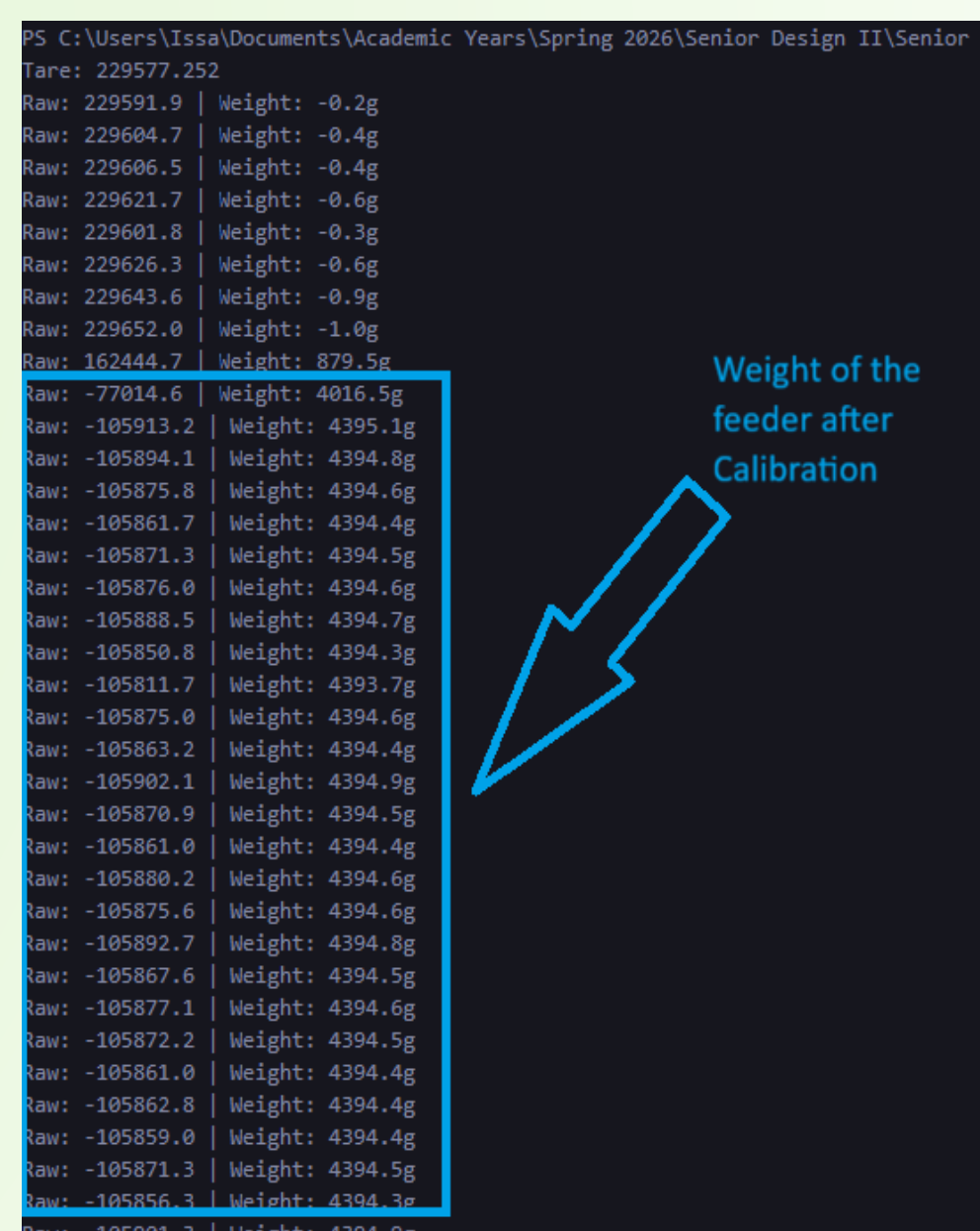
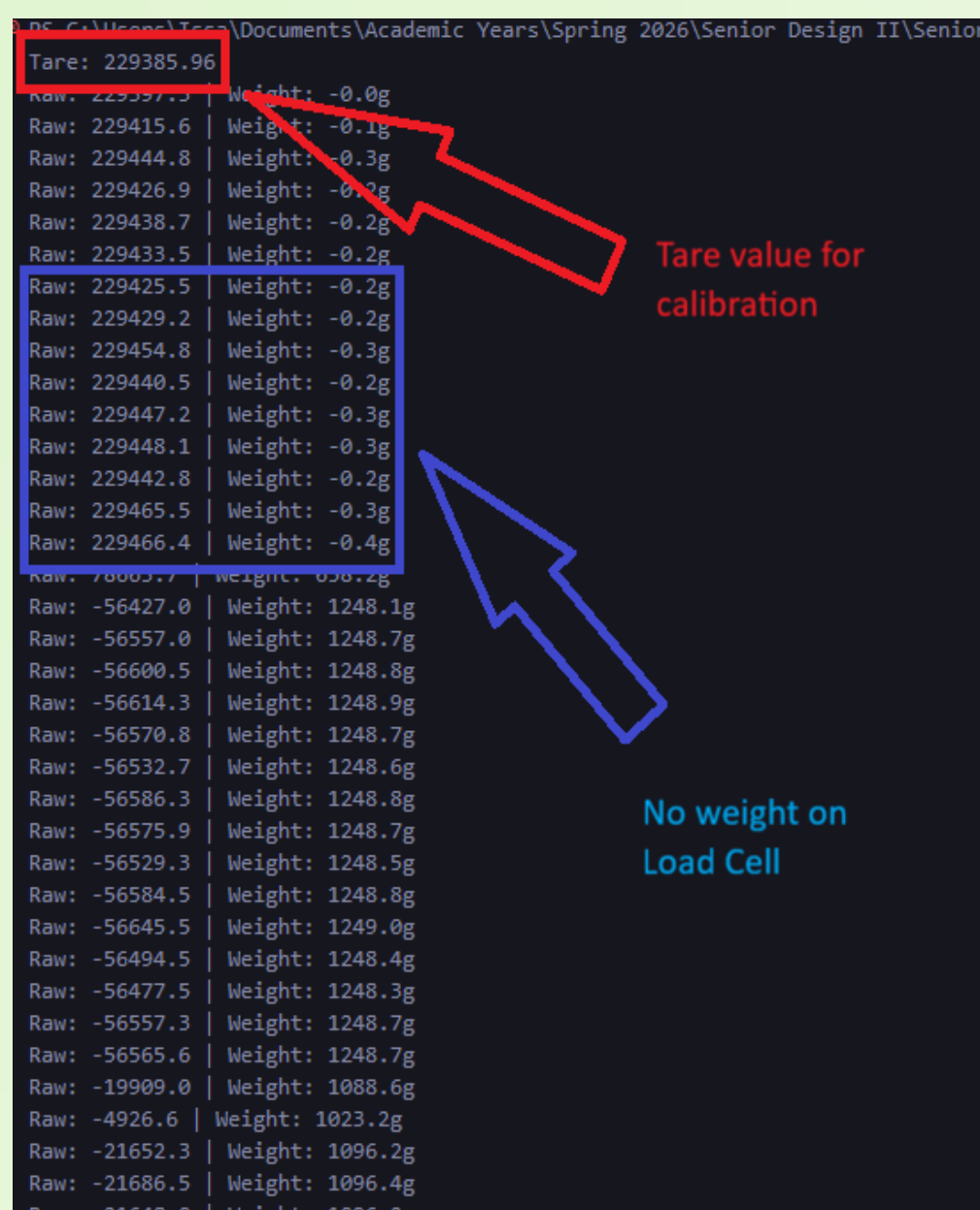
Parts Design



Experimental Results

Before
Calibration

After
Calibration



Before calibration, the load cell used a scaling factor of -230, which produced inaccurate and inconsistent readings, even when no weight was applied. After calibration, the scaling factor was adjusted to approximately -229 to better match the known weight of the feeder. This small adjustment significantly improved accuracy, resulting in stable readings that closely align with the actual weight, proving the importance of proper calibration.

Conclusion & Future Work

ISSA Feeda provides a reliable solution for accurate and safe pet feeding using weight-based control and UV-C sanitation.

- $\pm 1g$ feeding accuracy
- Improved portion consistency
- Safer food storage

Future Work:

- Mobile app integration
- Better calibration
- Added environmental sensors