

## Autonomous Agricultural Vehicle System

**Track Code:** 2020-SHAV-68903

**Categories:**

- Agriculture
- Computer Technology

**Keywords:**

- Active Monitoring
- Agriculture
- Communication Network
- Communications and Computing
- Computer Technology
- Controllers
- Crop Management
- Machine Learning
- Mechanical Systems

Researchers at Purdue University have developed a new machine-to-machine system for enhanced grain harvesting efficiency. The technology inputs fill strategy parameters and takes in visual and audio cues from an operator to control the loading, adjust dynamics in plant combines including flow rate, manage plant carts for edges and grain impact points, and conduct cab detection for plant tractors. The robust, closed-loop perception system also features cameras to monitor heavy dust, provide robust operation in poor visibility conditions, and can more accurately measure real-time fill levels than current technologies. This new crop management solution can help to prevent grain spillage, minimize fuel burn, and requires less technical skill to operate with ease.

**Advantages:**

- Semi-autonomous
- Active Control
- Cost Efficient

**Potential Applications:**

- Agriculture
- Computer science

**People:**

- Shaver, Gregory Matthew (Project leader)
- Corban, Stephen R

- Dhamankar, Shveta
- Evans, John
- Liu, Ziping
- Puryk, Corwin M.
- White, Ryan R.

**Intellectual Property:**

**Application Date:** December 8, 2020

**Type:** Utility Patent

**Country of Filing:** United States

**Patent Number:** (None)

**Issue Date:** (None)

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