

1,500 Pounds of Pumpkins, Zero Waste

How Georgia Tech turned holiday debris into a climate solution

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THE DATA

1,500 pounds

Pumpkins Diverted from Landfill

The second annual Pumpkin Smash event collected over 1,500 pounds of pumpkins for composting.

By redirecting this material, Georgia Tech's composting initiative demonstrates how large-scale organic waste recovery can be operationalized on a campus level.



Source: Georgia Institute of Technology · Published November 16, 2026
https://news.gatech.edu/news/2026/11/16/pumpkin-smash-turns-halloween-decorations-compost

01

Composting Is AI’s Hidden Workforce

While AI systems are often visualized in data centers or satellite control rooms, their most impactful applications are in material lifecycle management. The Pumpkin Smash event, powered by an in-vessel composter, exemplifies how AI-driven waste processing can scale sustainably. Real-time monitoring of temperature, moisture, and microbial activity in composting systems—enabled by embedded sensors and predictive algorithms—can optimize decomposition efficiency, reducing processing time and emissions. This is AI not in code, but in organic transformation.

02

Sustainability Is a Feedback Loop

The success of the Pumpkin Smash hinges not just on collection, but on behavioral design. By encouraging compostable decorations—wooden sticks over metal, uncoated paper over plastic—students are trained to think in closed-loop systems. This mirrors AI's role in commercial space: where spacecraft re-entry systems use predictive modeling to minimize debris, and satellite constellations rely on real-time feedback to avoid collisions. Both require systems that learn from failure, adapt in real time, and embed sustainability into design from the outset.

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