



*Analyze gut bacteria to provide personalized nutrition for blood sugar control.*

**Problem they solve:**

Managing blood sugar is difficult and different for every individual.

**Surprising Fact:**

Everyone has a unique bacterial "fingerprint". An apple could be healthy for you, but cause a sugar spike for your friend.

**Scientific Breakthrough:**

How does analyzing tiny bacteria in the gut help predict how your blood sugar will react to a specific meal?



*A management platform that integrates satellite, weather, and field data for farmers.*

**Problem they solve:**

Farmers often lack real-time data, leading to wasted water and low crop yields.

**Surprising Fact:**

The platform combines space-level satellite images with ground-level reports to make decisions for the farmer.

**Scientific Breakthrough:**

How can combining satellite pictures with dirt-level sensor data prevent a farmer from wasting water or pesticides?



*Grow real beef steaks from animal cells in a laboratory*

**Problem they solve:**

Traditional meat production is resource-heavy and environmentally harmful.

**Surprising Fact:**

Producing one lab-grown steak saves thousands of liters of water and avoids the carbon emissions of a 50-mile car drive.

**Scientific Breakthrough:**

How can a single cell become a juicy steak? Explain the process of "growing" meat without an animal.





*A wearable device that reads text aloud for the visually impaired.*

**Problem they solve:**

People with visual impairments struggle with daily tasks like reading menus or signs.

**Surprising Fact:**

It doesn't just read; it uses AI to recognize the faces of friends and family, whispering their names to the user.

**Scientific Breakthrough:**

The device "sees" printed symbols. How does a computer learn to "understand" that shapes on a page are meaningful words?



*Use sensors and AI to monitor beehive health and improve pollination.*

**Problem they solve:**

Global bee populations are declining, which threatens the world's food security.

**Surprising Fact:**

70% of our food (including pizza and chocolate!) depends on bees. Without them, our menus would vanish.

**Scientific Breakthrough:**

The system uses sensors to monitor hives. What data (sound, heat, movement) would reveal if bees are stressed or sick?