

Field Robotics: The Amiga and the Future of Farming

Welcome to our exploration of the Amiga robot and how it's transforming modern farming! Today we'll discover how robots are changing agriculture and shaping the future of food production.

 by Samantha Schmidt



Why Robotics in Agriculture?

Traditional Farming Challenges

- Labor shortages
- Time-consuming tasks
- Weather constraints

Robotic Solutions

- 24/7 operation
- Precision work
- Reduced resource waste

Key Parts of Autonomous Robots



GPS Navigation

Uses satellites to determine exact field position within inches.



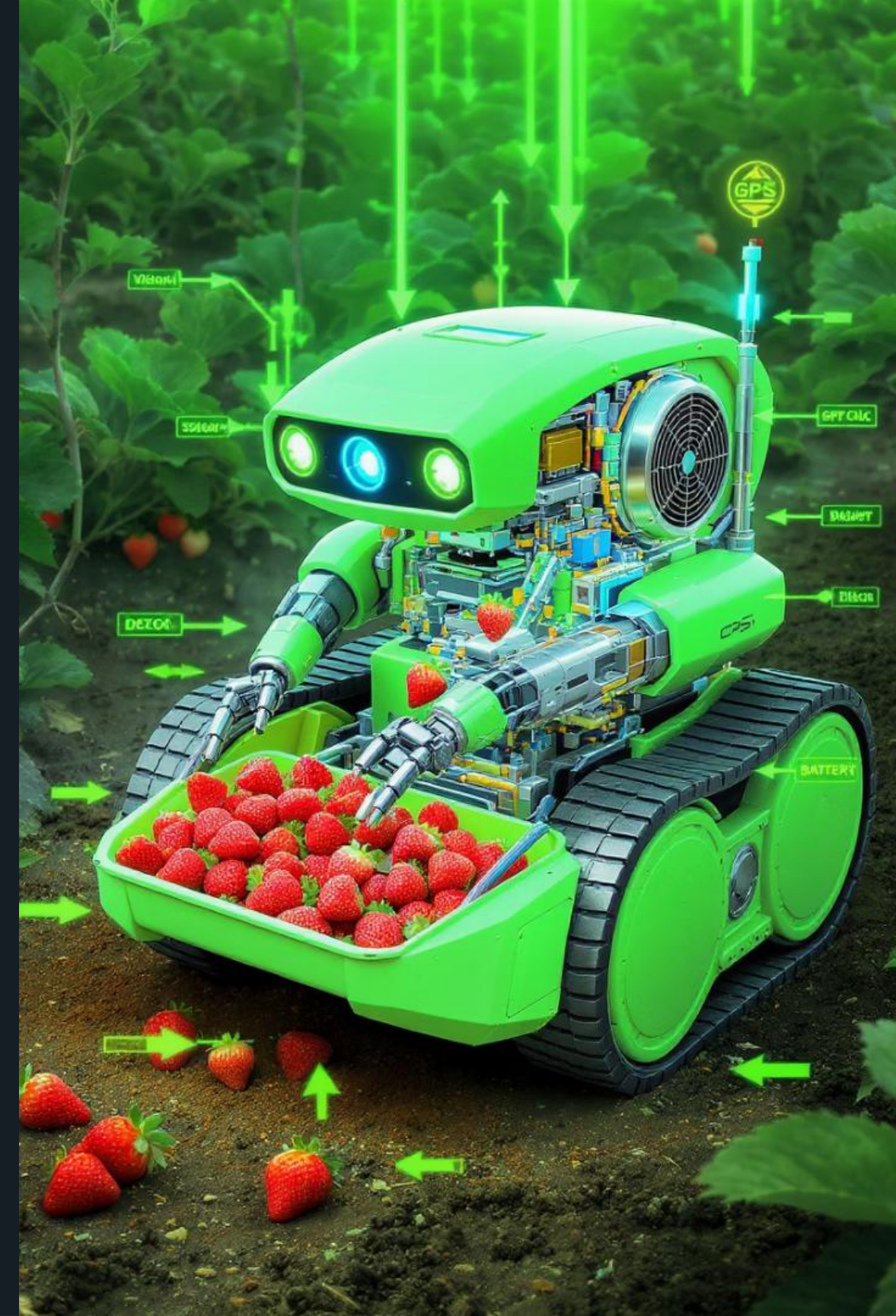
Advanced Sensors

Detects obstacles, crops, and field conditions in real-time.



Artificial Intelligence

Makes decisions based on data without human intervention.





Follow Mode Explained



Detection

Cameras identify the farmer to follow.



Tracking

Sensors monitor distance and direction constantly.



Adjustment

Robot speed matches the farmer's pace automatically.



Safety

Stops immediately if it loses sight of the farmer.

Benefits of Follow Mode

Hands-Free Helper

Farmers can focus on tasks while the robot carries heavy loads.

Tool Transport

Brings supplies exactly when and where they're needed.

Reduced Fatigue

Less walking back and forth means less physical strain.

Time Savings

Completes field work up to 30% faster than traditional methods.



Point A to B Navigation

Set Starting Point

Farmer marks Point A using the robot's interface or app.

Define Destination

Point B is selected on a digital map of the farm.

Autonomous Travel

Robot navigates between points without human guidance.

Task Completion

Automatically performs programmed work upon arrival.



What is 3-D Vision?

Multiple Cameras

Several lenses capture different angles of the same scene.

Field Mapping

Creates detailed 3D maps of the entire farm.



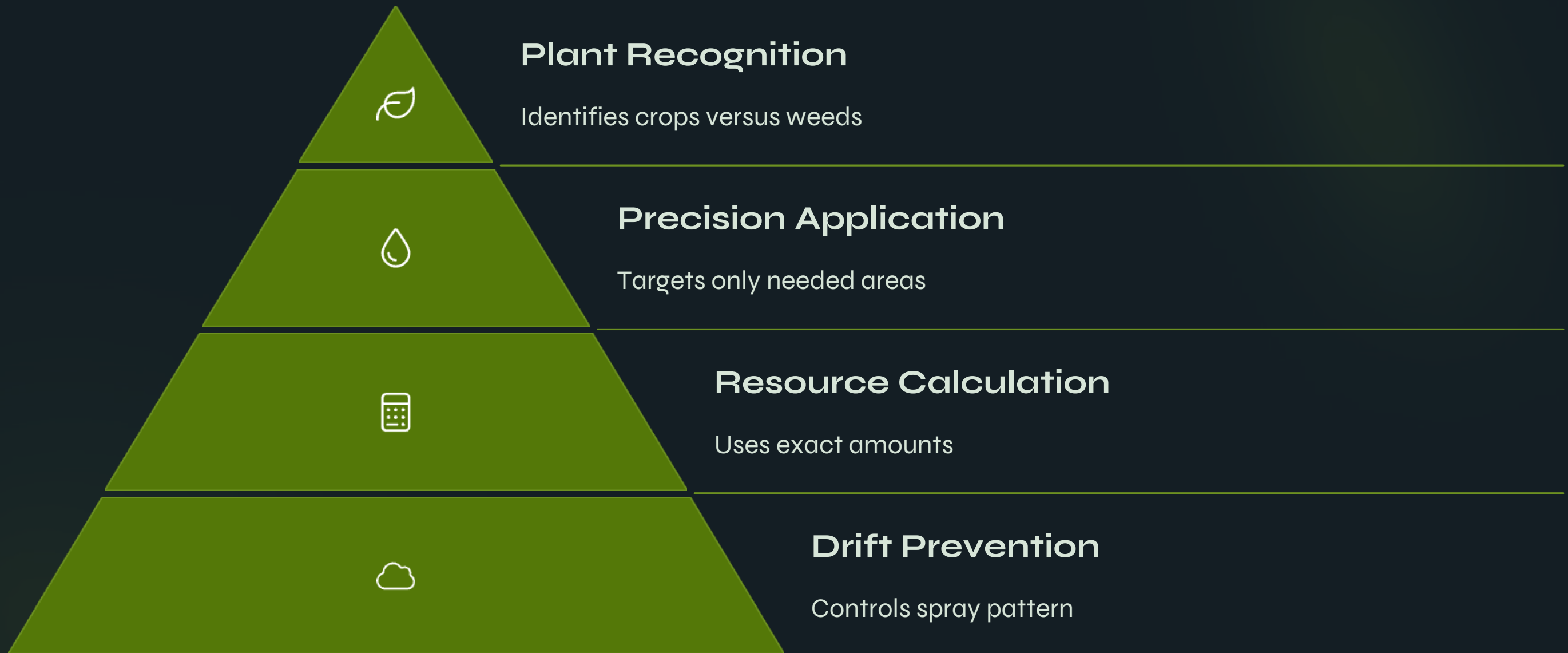
Depth Calculation

Computer compares images to determine distances accurately.

Obstacle Detection

Identifies rocks, holes, and other hazards to avoid.

Automated Spray Systems



Why This Matters

9.7B

Population by 2050

More people will need food than ever before.

70%

More Food Needed

Global food production must increase dramatically.

30%

Resource Reduction

Robots help farms use less water and chemicals.



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Careers in AgTech



Robotics Engineer

Design and build the next generation of farm robots.



AI Programmer

Create smart algorithms that help robots make decisions.



Drone Operator

Manage aerial robots that monitor crops and fields.



Sustainable Farmer

Use technology to grow food in environmentally friendly ways.



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Summary: The Amiga's Key Features

Follow Mode

Tracks and follows farmers automatically through the fields.



Point-to-Point

Navigates independently between designated locations.



Smart Spraying

Applies chemicals precisely where and when needed.



3D Vision

Sees and understands the farm environment in three dimensions.



What Do You Think?



What should farm robots do next?

Harvesting? Planting? Something else?



How would you improve them?

New features? Different designs?



Would you want to work with them?

Which AgTech career interests you most?