



## **ARTIFICIAL INTELLIGENCE (INT 404)**

Report On

AI In Agriculture (Plant Disease Detection)

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## Abstract

Throughout human history, technology has long been used in agriculture to improve efficiency and reduce the amount of intensive human labor involved in farming. From improved plows to irrigation, tractors to modern AI, it's an evolution that humans and agriculture have undergone since the invention of farming.

The growing and increasingly affordable availability of computer vision stands to become another significant step forward here.

With considerable changes occurring in our climate, environment, and global food needs, AI has the ability to transform 21st century agriculture by:

- Increasing efficiency of time, labor, and resources.
- Improving environmental sustainability.
- Making resource allocation "smarter".
- Providing real-time monitoring to promote animal health and quality of produce.

Of course, this will require some shifts in the agricultural industry. Farmers' knowledge of their "field" will need to be translated into AI training, and this will depend on greater technical and educational investments within the agricultural sector.

But then again, innovation and adaptation are nothing new in agriculture. Computer vision and agricultural robotics are just the latest way farmers can adopt new technology to meet growing global food demands and increase food security.