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(57) Abstract :

The invention discloses a computer vision system for smart agricultural yield prediction comprising an image capture unit (101), a preprocessing module (102), a feature extraction engine (103), a data fusion module (104), a sensor integration unit (105), and a predictive model (106). Yield forecasts are displayed through a user interface application (107), while a continuous learning mechanism (108) improves accuracy over time. The system ensures reliable, scalable, and data-driven yield prediction to support sustainable agricultural practices.

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