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(51) International classification	:G05D0001000000, A01B0079000000, G06V0020100000, G06N0020000000, A01G0025160000	(71) <b>Name of Applicant :</b> <b>1)RVR &amp; JC COLLEGE OF</b> Address of Applicant :RVR & JC COLLEGE OF ENGINEERING CHANDRAMOULIUPURAM, CHOWDAVARAM, GUNTUR PIN - 522 019 CHANDRAMOULIUPURAM Andhra Pradesh India
(31) Priority Document No	:NA	(72) <b>Name of Inventor :</b>
(32) Priority Date	:NA	<b>1)Dr. P. SURESH KUMAR</b>
(33) Name of priority country	:NA	<b>2)Y. HEMANTH KUMAR</b>
(86) International Application No	:	<b>3)P. ABDUL KHADAR</b>
Filing Date	:01/01/1900	<b>4)M.SAI AJAY KUMAR</b>
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(57) Abstract :

An autonomous enabled smart agriculture robot is disclosed. The autonomous enabled smart agriculture robot includes a mobility platform configured to autonomously navigate across an agricultural field. A sensor module comprising one or more sensors selected from the group consisting of an image sensor, a soil moisture sensor, a temperature sensor, a humidity sensor, and a proximity sensor, for detecting environmental or crop parameters. A control and processing unit communicatively coupled to the sensor module and configured to receive sensor data, analyze said data using artificial intelligence (AI) models, and determine one or more agricultural actions. An actuation module comprising one or more actuators configured to perform agricultural operations including at least one of seeding, watering, spraying, weeding, soil tilling, or harvesting, based on the determined actions. A navigation module including a global positioning system (GPS) unit and an obstacle detection unit configured to enable real-time path planning and collision avoidance

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