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## (54) Title of the invention: IOT BASED INTELLIGENT FOLDABLE CEILING FAN

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# (57) Abstract:

The present invention pertains to a smart ceiling fan system (10) designed to operate based on ambient temperature and user proximity. The system features a ceiling fan (10) with retractable blades (11) concealed within a false ceiling of a room. Utilizing strategically positioned proximity sensors (13) and a temperature sensor (14), the system detects the presence of individuals and measures the ambient room temperature. When an individual enters within a predefined proximity range and the room temperature surpasses a predefined threshold, the fan's retractable blades (11) automatically extend, enabling efficient air circulation. Moreover, the system incorporates a voice-enabled Natural Language Processing (NLP) module (16), empowering users to control the fan through voice commands when automatic operation is not required

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