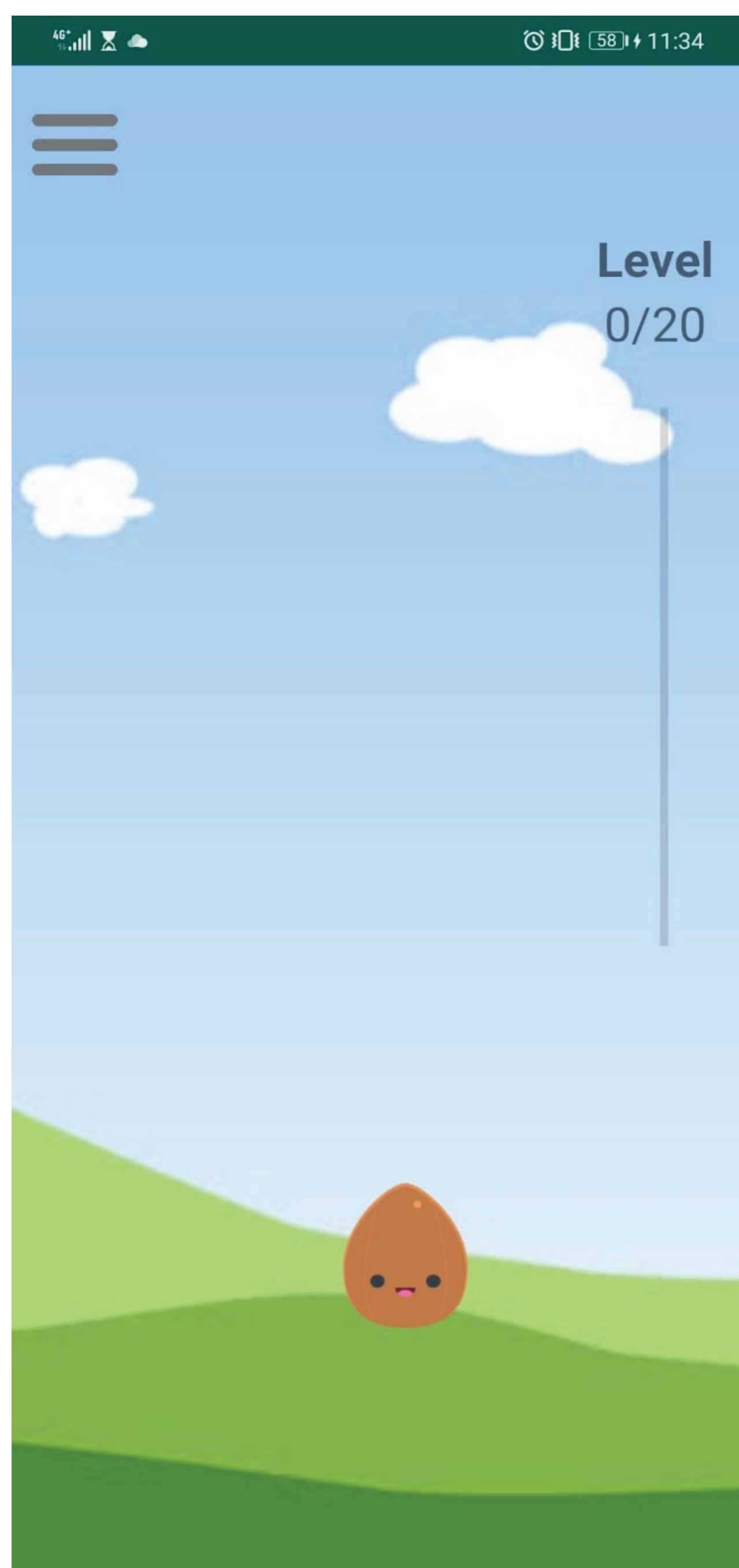


Parkinson's Disease Risk Analytics System based on Chinese Handwriting

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Parkinson's disease (PD) is a debilitating neurodegenerative disorder, affecting an estimated 7 to 10 million people worldwide. The project aims to develop an accessible, longitudinal, and self-administered PD screening method, which can be embedded into common mobile keyboards, to provide a non-intrusive early diagnosis for more efficient treatments to manage PD symptoms.



(a) Plant growing game progress



(b) Writing interface



(c) Writing gallery

The app collects handwriting information through a gamified process(a). Data such as writing trajectory, number of attempts for a word and whether a word is correctly written (recognized by Intelligent Character Recognition system) is recorded through the writing interface (b). Written words will be displayed in the app gallery (c). The collected time-series data is used as input to the CNN-LSTM model to predict for early signs of Parkinson symptoms in users.