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JE et al.(10) **Pub. No.: US 2022/0385295 A1**(43) **Pub. Date: Dec. 1, 2022**(54) **ELECTRONIC DEVICE AND METHOD OF
OPERATING THE SAME**(71) Applicant: **SK hynix Inc.**, Icheon-si (KR)(72) Inventors: **Sang Eun JE**, Icheon-si (KR); **Ki
Young KIM**, Icheon-si (KR)(21) Appl. No.: **17/521,603**(22) Filed: **Nov. 8, 2021**(30) **Foreign Application Priority Data**

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(2013.01); **G11C 13/003** (2013.01)(57) **ABSTRACT**

An electronic device includes analog-to-digital converters each configured to receive an analog input signal and output a digital output signal corresponding to the analog input signal, an analog input signal generator configured to generate analog input signals provided to each analog-to-digital converter based on input voltages and weight data, an input signal distribution information generator configured to generate input signal distribution information indicating a distribution of the analog input signals for each of the analog-to-digital converters, an analog-to-digital converter group classifier configured to classify the analog-to-digital converters into a plurality of first analog-to-digital converter groups based on the input signal distribution information, and an analog-to-digital converter input range optimizer configured to determine an input range of each first analog-to-digital converter group based on the input signal distribution information, and each analog-to-digital converter is configured to operate according to an input range of a corresponding first analog-to-digital converter groups.

