(19) **United States**

(12) **Patent Application Publication** (10) Pub. No.: **US 2023/0231861 A1**
Chen et al. (43) **Pub. Date: Jul. 20, 2023**

(54) **COMPUTER-IMPLEMENTED METHOD, DEVICE, AND COMPUTER PROGRAM PRODUCT**

(71) Applicant: **Dell Products L.P.**, Round Rock, TX (US)

(72) Inventors: **Qiang Chen**, Shanghai (CN); **Jiacheng Ni**, Shanghai (CN); **Zijia Wang**, WeiFang (CN); **Zhen Jia**, Shanghai (CN)

(21) Appl. No.: **17/666,776**

(22) Filed: **Feb. 8, 2022**

(30) **Foreign Application Priority Data**

Jan. 19, 2022   (CN) 202210061803.2

Publication Classification

(51) **Int. Cl.**
  H04L 9/40   (2006.01)

(52) **U.S. Cl.**
  CPC *H04L 63/1425* (2013.01); *H04L 63/1416* (2013.01); *H04L 63/1466* (2013.01); *H04L 63/20* (2013.01); *H04L 63/102* (2013.01)

(57) **ABSTRACT**

Embodiments of the present disclosure relate to a computer-implemented method, device, and computer program product. The method includes: determining, based on a set of user behavior data over a first time period, a set of behavioral features for a user behavior over the first time period. The method further includes: determining, based on the set of behavioral features, a set of anomaly scores for the user behavior according to an anomaly detection model. The anomaly detection model is trained based on user behavior data over a second time period. The method further includes: updating a previously determined anomaly score threshold based on comparison of the determined set of anomaly scores with the anomaly score threshold. The anomaly score threshold is used for indicating whether the user behavior is anomalous. By continuously updating the anomaly score threshold, the solution uses the updated anomaly score threshold for anomaly detection of user behavior.