

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
26 December 2024 (26.12.2024)



(10) International Publication Number
WO 2024/263365 A1

(51) International Patent Classification:

G06Q 20/40 (2012.01) H04L 9/00 (2006.01)
G06Q 20/06 (2012.01) G06N 20/00 (2019.01)
G06Q 20/38 (2012.01)

(21) International Application Number:

PCT/US2024/031810

(22) International Filing Date:

31 May 2024 (31.05.2024)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23180178.8 19 June 2023 (19.06.2023) EP

(71) Applicant: **MASTERCARD INTERNATIONAL INCORPORATED** [US/US]; 2000 Purchase Street, Purchase, NY 10577 (US).

(72) Inventors: **TANEJA, Mohit**; 2000 Purchase Street, Purchase, NY 10577 (US). **CONWAY, James**; 2000 Purchase Street, Purchase, NY 10577 (US). **NICHOLLS, Jack**; 2000 Purchase Street, Purchase, NY 10577 (US). **KOTHALE, Nitish**; 2000 Purchase Street, Purchase, NY 10577 (US). **MORAN, Weston**; 2000 Purchase Street, Purchase, NY 10577 (US). **HOLLAND, Shannon**; 2000 Purchase Street, Purchase, NY 10577 (US). **FLINTER, Stephen, Patrick**; 2000 Purchase Street, Purchase, NY 10577 (US).

(74) Agent: **KLOCINSKI, Steven**; Mastercard International Incorporated, 2000 Purchase Street, Purchase, NY 10577 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY,

(54) Title: PREDICTING WHETHER A TRANSACTION OF A DIGITAL CURRENCY STORED IN A BLOCKCHAIN IS FRAUDULENT

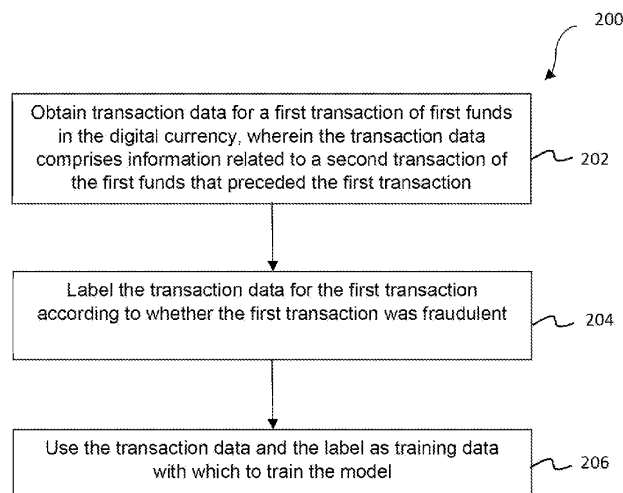


Fig. 2

(57) Abstract: A computer implemented method of training a model, using a machine learning process, to predict whether a transaction of a digital currency stored in a blockchain is fraudulent, comprises: obtaining (202) transaction data for a first transaction of first funds in the digital currency, wherein the transaction data further comprises information related to a second transaction of the first funds that preceded the first transaction. The method further comprises labelling (204) the transaction data for the first transaction according to whether the first transaction was fraudulent and using (206) the transaction data and the label as training data with which to train the model.

[Continued on next page]

MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA,
NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO,
RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS,
ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every
kind of regional protection available*): ARIPO (BW, CV,
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST,
SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ,
RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ,
DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT,
LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE,
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN,
GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*