



- (51) **International Patent Classification:**
G06N 20/20 (2019.01) *G06Q 40/06* (2012.01)
- (21) **International Application Number:**
PCT/IB2025/050168
- (22) **International Filing Date:**
07 January 2025 (07.01.2025)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
63/618,678 08 January 2024 (08.01.2024) US
- (71) **Applicant:** ARTA TECH PTE. LTD. [SG/SG]; 5 Shenton Way, #12-01/04 UIC Building, Singapore 068808 (SG).
- (72) **Inventors:** YAGNIK, Chirag; 153 Castro Street, Suite 200, Mountain View, California 94041 (US). TURCHETTO, Riccardo; 153 Castro Street, Suite 200, Mountain View, California 94041 (US). SENGUPTA, Caesar; 153 Castro Street, Suite 200, Mountain View, California 94041 (US). RAPAKA, Venkat; 153 Castro Street, Suite 200, Mountain View, California 94041 (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, 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, UY, 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).

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

- (54) **Title:** SYSTEM AND METHOD FOR UPDATING MACHINE-LEARNING MODELS

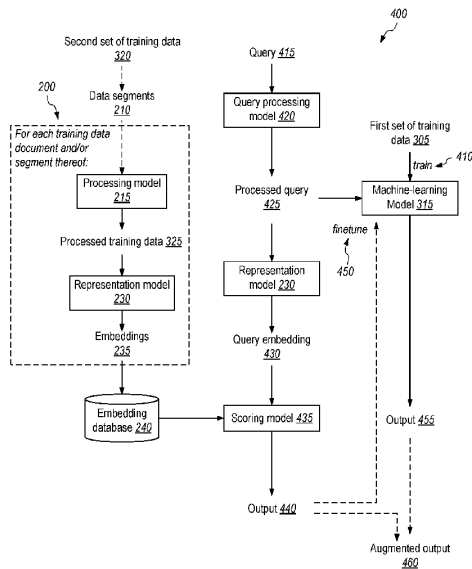


FIG. 4

(57) **Abstract:** In an embodiment, a method includes receiving a query specifying a request for a recommendation of an asset portfolio, identifying a set of digitally stored documents for use in re-training a trained machine-learning model capable of outputting a recommendation of a particular asset portfolio, generating and storing in memory of the first computer document segments for each document of the set of documents, determining at least a theme and a theme-specific summary for each document segment among the document segments, generating document embeddings for the document segments of each document of the set of documents, the document embedding for each document segment embedding the theme, and the theme-specific summary associated with that document segment, re-training the trained machine-learning model based on the document embeddings to produce a re-trained machine-learning model, and executing an inference stage of the re-trained machine-learning model over the query to cause outputting a recommended asset portfolio.

Published:

- *with international search report (Art. 21(3))*
- *with amended claims (Art. 19(1))*