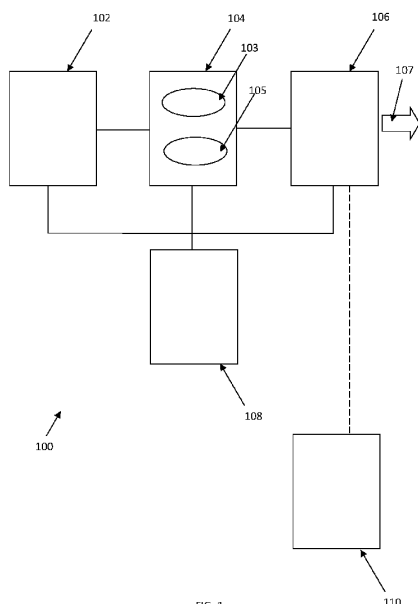




- | | |
|--|--|
| <p>(51) International Patent Classification:
 <i>G06F 40/44</i> (2020.01) <i>G06N 20/20</i> (2019.01)</p> <p>(21) International Application Number:
 PCT/SG2023/050190</p> <p>(22) International Filing Date:
 23 March 2023 (23.03.2023)</p> <p>(25) Filing Language: English</p> <p>(26) Publication Language: English</p> <p>(30) Priority Data:
 10202202971Y 23 March 2022 (23.03.2022) SG</p> <p>(71) Applicant: AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH [SG/SG]; 1 Fusionopolis Way, #20-10, Connexis North Tower, Singapore 138632 (SG).</p> <p>(72) Inventors: WU, Kui; c/o PKM, Institute for Infocomm Research, 1 Fusionopolis Way, #21-01 Connexis (South Tower), Singapore 138632 (SG). XIANG, Yuanxin; c/o PKM, Institute for Infocomm Research, 1 Fusionopolis Way, #21-01 Connexis (South Tower), Singapore 138632 (SG). AW, Ai Ti; c/o PKM, Institute for Infocomm Research, 1 Fusionopolis Way, #21-01 Connexis (South Tower), Singapore 138632 (SG). VANGANI, Tarun Kumar; c/o PKM, Institute for Infocomm Research, 1 Fusionopolis</p> | <p>Way, #21-01 Connexis (South Tower), Singapore 138632 (SG).</p> <p>(74) Agent: DONALDSON & BURKINSHAW LLP; P.O. Box 3667, Robinson Road, Post Office, Singapore 905667 (SG).</p> <p>(81) Designated States (<i>unless otherwise indicated, for every kind of national protection available</i>): 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, UZ, VC, VN, WS, ZA, ZM, ZW.</p> <p>(84) Designated States (<i>unless otherwise indicated, for every kind of regional protection available</i>): 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,</p> |
|--|--|

(54) **Title:** A SYSTEM AND METHOD FOR INCREMENTAL LEARNING IN MACHINE TRANSLATION



(57) Abstract: A system and a method for incremental learning in machine translation may be provided, the system comprises an input module for obtaining a source language input to be translated into a target language output; an ensemble model module coupled to the input module, the ensemble model module comprising a baseline model trained using a first dataset, the baseline model arranged to receive the source language input to generate a baseline model target language output with associated one or more baseline model probability scores; at least one first adapted model trained using a second dataset, the second dataset being smaller than the first dataset, the at least one first adapted model arranged to receive the source language input to generate a first adapted model target language output with associated one or more first adapted model probability scores; and a determination module coupled to the ensemble model module for receiving the one or more baseline model probability scores and the one or more first adapted model probability scores, the determination module arranged to generate a system target language output based on the received one or more baseline model probability scores and the received one or more first adapted model probability scores.

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:

— *of inventorship (Rule 4.17(iv))*

Published:

— *without international search report and to be republished
upon receipt of that report (Rule 48.2(g))*