



(51) International Patent Classification:

A61B 5/00 (2006.01) *A61B 5/024* (2006.01)
A61B 5/0205 (2006.01) *G06F 19/00* (2011.01)
A61B 5/0452 (2006.01) *G06N 99/00* (2010.01)

(21) International Application Number:

PCT/SG2014/000110

(22) International Filing Date:

7 March 2014 (07.03.2014)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

13/791,764 8 March 2013 (08.03.2013) US

(71) Applicant: **SINGAPORE HEALTH SERVICES PTE LTD** [SG/SG]; 31 Third Hospital Avenue, #03-03 Bowyer Block C, Singapore 168753 (SG).

(72) Inventors: **ONG, Eng, Hock, Marcus**; Department of Emergency Medicine, Singapore General Hospital, Outram Road, Singapore 169608 (SG). **LIU, Nan**; Department of Emergency Medicine, Singapore General Hospital, Outram Road, Singapore 169608 (SG).

(74) Agents: **SIM, Charlie** et al.; Axis Intellectual Capital Pte Ltd, 21 Science Park Road, #03-01, The Aquarius, Science Park II, Singapore 117628 (SG).

(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, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, 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, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, 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, 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))

(54) Title: SYSTEM AND METHOD OF DETERMINING A RISK SCORE FOR TRIAGE

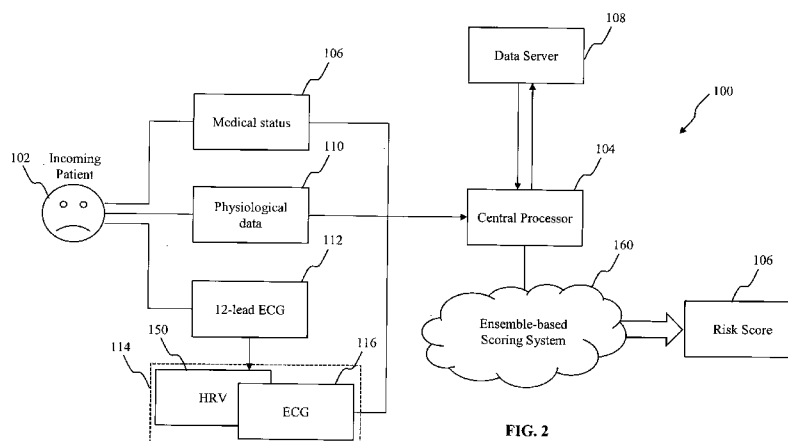


FIG. 2

(57) Abstract: The present disclosure provides a system and method of determining a risk score for triage. In particular, a system is provided for providing an assessment of risk of a cardiac event for a patient, for example an incoming patient to a hospital emergency department complaining of chest pain. In the disclosure, the system includes an input device for measuring physiological data based vital signs parameter of the patient, a twelve-lead electrocardiogram (ECG) device for establishing an ECG obtained from results of the electrocardiography procedure, and determining an ECG parameter and a heart rate variability (HRV) parameter therefrom. An ensemble-based scoring system is further provided, establishing weighted classifier based on past patient data and where the vital signs parameter, the ECG parameter and the HRV parameter are compared to corresponding weighted classifiers to determine a risk score. A corresponding method to determine a risk score for triage is also provided.