

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

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
12 September 2024 (12.09.2024)



(10) International Publication Number
WO 2024/184690 A1

(51) International Patent Classification:

G16H 30/40 (2018.01) G16H 50/50 (2018.01)
G16H 50/20 (2018.01) A61B 5/02 (2006.01)

(21) International Application Number:

PCT/IB2023/059810

(22) International Filing Date:

29 September 2023 (29.09.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

23461531.8 09 March 2023 (09.03.2023) EP

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(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, 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).

(54) Title: A METHOD OF TRAINING AN ARTIFICIAL DEEP NEURAL NETWORK FOR ESTIMATION OF HEMODYNAMIC PARAMETER, A METHOD OF ESTIMATION OF HEMODYNAMIC PARAMETER, COMPUTER PROGRAM PRODUCTS AND COMPUTER SYSTEMS

(57) Abstract: A method of training of an artificial deep neural network (ADNN) for estimation of a hemodynamic parameter from a geometry of a blood vessel tree comprising a step of obtaining of a set of geometries of vessel trees, according to the invention is realized with the ADNN having an architecture adapted for point cloud processing with distance based point grouping. The distance is defined as geodesic distance along the blood vessel tree. A method of estimation of hemodynamic parameters from a geometry of a blood vessel tree using an ADNN, according to the invention, involves using ADNN adapted for point cloud processing with geodesic distance based point grouping. The invention concerns also a computer program products comprising a set of instruction that, when run on a computing system, cause it to realize the methods according to the invention. The invention concerns also a computer system adapted to realize methods according to the invention.



Fig. 9

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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))*
- *of inventorship (Rule 4.17(iv))*

Published:

- *with international search report (Art. 21(3))*
- *in black and white; the international application as filed contained color or greyscale and is available for download from PATENTSCOPE*