

(51) International Patent Classification:
G06N 5/02 (2006.01)(21) International Application Number:
PCT/EP2011/065555(22) International Filing Date:
8 September 2011 (08.09.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/877,461 8 September 2010 (08.09.2010) US(71) Applicant (for all designated States except US): **INSTITUT TELECOM-TELECOM PARISTECH** [FR/FR];
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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, 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, IS, JP, KE, KG, KM, 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, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

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(54) Title: METHOD FOR PROVIDING WITH A SCORE AN OBJECT, AND DECISION-SUPPORT SYSTEM

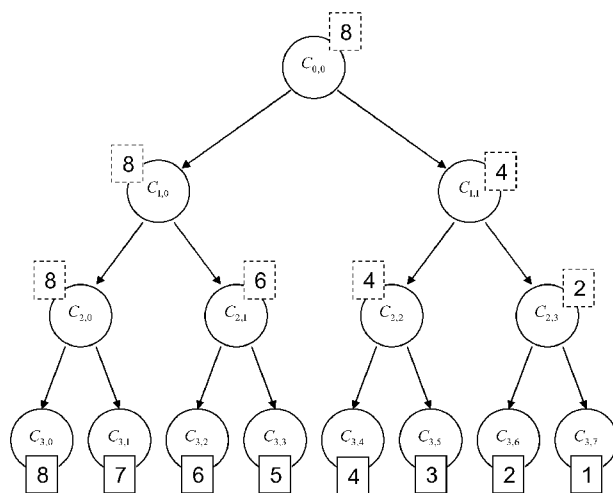


FIG. 1

(57) Abstract: The present invention is related to a method for providing with a score an object represented by a target item from a multidimensional space, said score being representative of the probability that the object satisfies a given binary property, said method being performed in a computer environment comprising processing means connected to memory means, comprising the following steps: (a) providing and storing in the memory means data representative of a set of sample items from said multidimensional space, each sample item being associated with a multi-value label representative of the probability that an object represented by said sample item satisfies the given binary property; (b) storing in the memory means data representative of the target item; (c) with said processing means, generating and storing in said memory means data representative of an oriented binary tree with a given height, said binary tree being defined by a plurality of nodes having index values in relation with their position in the binary tree, said nodes comprising a root node, intermediate nodes and terminal nodes, and each node being associated with a subspace of the multidimensional space according to the following rules: - if the node is a root node, the associated subspace is the whole multidimensional subspace; - if the node i is a non-terminal node, its associated subspace is split into two disjoint subspaces ε_+ and ε_- respectively associated with a first child node and a second child node of said non-terminal node, said splitting being performed by the processing unit according to a classifier minimizing the number of sample items associated

with a first given label value to belong to the subspace ε_+ , and/or the number of sample items associated with a second given label value to belong to the subspace ε_- , said second label value being representative of a higher probability that an object represented by said sample item satisfies the given binary property than said first given label value; (d) with said processing means,

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| — as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) | Published: |
| — as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) | — without international search report and to be republished upon receipt of that report (Rule 48.2(g)) |
| — of inventorship (Rule 4.17(iv)) | |

associating with at least each terminal node of the binary tree a score depending on its index value in the binary tree, and storing the score value in the memory means; (e) with said processing means, identifying a target node, the target node being a terminal node whose associated subspace comprises the target item; and (f) outputting the score value associated with said target node. The invention is also related to a decision-support system.