

Title (en)  
PREDICTION OF LABELS FOR DIGITAL IMAGES, ESPECIALLY MEDICAL ONES, AND SUPPLY OF EXPLANATIONS ASSOCIATED WITH THESE LABELS

Title (de)  
VORHERSAGE VON ETIKETTEN FÜR DIGITALE BILDER, INSBESONDERE MEDIZINISCHE BILDER, UND BEREITSTELLUNG VON ERKLÄRUNGEN IM ZUSAMMENHANG MIT DIESEN ETIKETTEN

Title (fr)  
PRÉDICTION D'ÉTIQUETTES POUR IMAGES NUMÉRIQUES NOTAMMENT MÉDICALES ET FOURNITURE D'EXPLICATIONS ASSOCIÉES AUXDITES ÉTIQUETTES

Publication  
**EP 4189642 A1 20230607 (FR)**

Application  
**EP 21752088 A 20210721**

Priority  
• FR 2007935 A 20200728  
• FR 2021051363 W 20210721

Abstract (en)  
[origin: WO2022023646A1] The invention relates to a method for predicting labels associated with a digital image, comprising a prediction phase consisting of: - supplying the image (I) to a segmentation neural network (SN) configured to predict a classification of the pixels of the image in a first set of classes; and, - supplying at least part of this classification to a classification neural network (CN), configured to predict a set of labels for said image from the classification P of the pixels; said segmentation and classification neural networks being determined by a training phase comprising, for each image of a training set, the first and second steps; and the determination of a location of the background of said image, from the classification of the pixels, and the optimisation of the weights of the neural networks, according to a set of cost functions configured, by iteration, to maximise the quality of the set of labels as a function of labels previously established and associated with the image, and to maximise the probability of not predicting any label for the background.

IPC 8 full level  
**G06T 7/11** (2017.01); **G06N 3/04** (2023.01); **G06N 3/08** (2023.01); **G06T 7/00** (2017.01); **G06T 7/194** (2017.01)

CPC (source: EP IL US)  
**G06N 3/045** (2023.01 - EP IL); **G06N 3/08** (2013.01 - EP IL); **G06T 7/0014** (2013.01 - EP IL); **G06T 7/11** (2016.12 - EP IL); **G06T 7/194** (2016.12 - EP IL); **G06V 10/764** (2022.01 - US); **G06V 10/82** (2022.01 - US); **G06T 2207/20076** (2013.01 - EP IL); **G06T 2207/20081** (2013.01 - EP IL); **G06T 2207/20084** (2013.01 - EP IL); **G06T 2207/30096** (2013.01 - EP IL)

Citation (search report)  
See references of WO 2022023646A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

Designated validation state (EPC)  
KH MA MD TN

DOCDB simple family (publication)  
**WO 2022023646 A1 20220203**; EP 4189642 A1 20230607; FR 3113157 A1 20220204; FR 3113157 B1 20220909; IL 300233 A 20230301; US 2023306731 A1 20230928

DOCDB simple family (application)  
**FR 2021051363 W 20210721**; EP 21752088 A 20210721; FR 2007935 A 20200728; IL 30023323 A 20230126; US 202118018310 A 20210721