

Title (en)

SYSTEMS CONFIGURED FOR AREA-BASED HISTOPATHOLOGICAL LEARNING AND PREDICTION AND METHODS THEREOF

Title (de)

SYSTEME FÜR AREALBASIERTES HISTOPATHOLOGISCHES LERNEN, VORHERSAGE UND VERFAHREN DAFÜR

Title (fr)

SYSTÈMES CONFIGURÉS POUR UNE PRÉDICTION ET UN APPRENTISSAGE HISTOPATHOLOGIQUES BASÉS SUR UNE ZONE ET PROCÉDÉS ASSOCIÉS

Publication

**EP 4100966 A4 20240221 (EN)**

Application

**EP 21751296 A 20210205**

Priority

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- US 2021016866 W 20210205

Abstract (en)

[origin: CN115335920A] Histopathologic scoring can be based on regions of certain types of cells identified by bioassays or expression of genotypic or phenotypic features of these cells. Automated scoring process using an image analysis algorithm includes correct delineation of a region of interest, this process being referred to as segmentation. This system and method accomplishes such segmentation using a generative adversarial network trained to generate a mask covering each region of interest. The present invention can perform both segmentation and classification by using a separate image band for each classification. By interpreting individual image bands for each region, a scoring algorithm may utilize, for example, classification of tumor regions and immune cell stained regions. Classification problems with more image bands will use images with equal number of image bands. There is no limitation on the number of image bands that the image can encode for each pixel.

IPC 8 full level

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Citation (search report)

- [XAYI] WO 2015054666 A1 20150416 - UNIV TEXAS [US], et al
- [Y] MAHMOOD FAISAL ET AL: "Deep Adversarial Training for Multi-Organ Nuclei Segmentation in Histopathology Images", IEEE TRANSACTIONS ON MEDICAL IMAGING, IEEE, USA, vol. 39, no. 11, 4 July 2019 (2019-07-04), pages 3257 - 3267, XP011816670, ISSN: 0278-0062, [retrieved on 20201028], DOI: 10.1109/TMI.2019.2927182
- See also references of WO 2021158952A1

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