Software-Implementation Of Semantic Segmentation Methods For Chest Radiographs

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TECHNOLOGY DESCRIPTION

Software is a set of tools that streamline the process of building neural network models for use in radiology. The software is able to handle heterogeneous data sources and file formats, converting them to the proper data format to be used to build and run neural networks. Moreover, it takes & parses file-based medical images, then loads the appropriate studies into a user-specified format translatable to a deep learning model; these images can be aggregated to either develop a deep learning model where models are trained and saved, or to make predictions using an existing model. The predictions made by the neural networks are subsequently processed and can be individually visualized and classified, or aggregated on the group level for analysis.

APPLICATIONS

This software could be used to evaluate chest radiographs for pneumonia in real-time

ADVANTAGES

Combines open-sourced AI tools with open-sourced tools that process medical images. It streamlines and allows for straightforward application of AI/deep learning/neural network-tools to chest radiographs.

STATE OF DEVELOPMENT

We have demonstrated this for diagnosing pneumonia and identification of hardware on chest radiographs.

INTELLECTUAL PROPERTY INFO

The software is available for licensing.

CONTACT

University of California, San Diego
Office of Innovation and Commercialization
innovation@ucsd.edu
tel: 858.534.5815.

OTHER INFORMATION

KEYWORDS

AI, Deep Learning, Computer-aided Diagnostics

CATEGORIZED AS

- **Computer**
  - Software
- **Imaging**
  - Medical

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