Errata for "Segmentation of Organs at Risk in CT Images of Chest Cavity"

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Introduction

This document lists the corrections for errors identified in the PhD thesis "Segmentation of Organs at Risk in CT Images of Chest Cavity". This errata aims to provide accurate information to readers and ensure the integrity of the work. If you discover any additional errors, please contact the author at max.manko2595@gmail.com.

Errata Entries

- **Page 89, Paragraph 5 and the following unnumbered equations**

  - **Error:** "The functionality of the proposed attention block is articulated through the following computational expressions:

  $$\text{attn}_{ij} = \text{softmax}\left(\frac{f(x)_i \cdot g(x)_j^T}{\|f(x)_i\| \cdot \|g(x)_j\|} \right)$$

  $$o = \text{attn} \cdot v(x)$$

  $$y = x + \text{conv}(o_r)$$

  where $f(x)$, $g(x)$, and $v(x)$ represent the query, key, and value tensors, respectively; $\|\cdot\|$ denotes the vector's L2-norm; softmax() is the softmax function applied over the last dimension; γ is the scaling parameter of the attention block; σ is the weight parameter of the attention block output; o_r is the reshaped output tensor o; and conv() refers to a convolutional layer."

  - **Correction:** "The functionality of the proposed attention block is articulated through the following computational expressions:

  $$g_p(x) = \text{pool}(g(x))$$

  $$h_p(x) = \text{pool}(h(x))$$

  $$\text{attn}_{ij} = \text{softmax}\left(\beta \cdot \frac{f(x)_i \cdot g_p(x)_j^T}{\|f(x)_i\| \cdot \|g_p(x)_j\|} \right)$$

  $$o = \text{attn} \cdot h_p(x)$$

  $$y = x + \gamma \cdot \text{conv}(o_r)$$

where $f(x)$, $g(x)$, and $h(x)$ represent the query, key, and value tensors, respectively; $\|\cdot\|$ denotes the vector's L2-norm; softmax() is the softmax function applied over the last dimension; β is the scaling parameter of the attention block; γ is the weight parameter of the attention block output; o_r is the reshaped output tensor o; and conv() and pool() refers to a convolutional and pooling layers correspondingly."

– **Date Noted:** June 11, 2024

- **Page 98, Figure 6.5:**

    – **Error:** The caption reads "Self-attention maps: *(a)* Input image and mask; *(b)* Attention maps for one head of intermediate CS-SA blocks *(top)* and vanilla self-attention blocks *(bottom)*"

    – **Correction:** The caption should read "Self-attention maps: *(a)* Input image and mask; *(b)* Attention maps for one head of intermediate CS-SA! blocks *(bottom)* and vanilla self-attention blocks *(top)*; *(c)* Attention mask for the pixel marked pink in the input image for CS-SA blocks *(bottom)* and vanilla self-attention blocks (top)"

    – **Date Noted:** June 16, 2024

Contact Information

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