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Ruikai Zhang , Yali Zheng , Carmen C.Y. Poon , Dinggang Shen , James Y.W. Lau

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Ruikai Zhang[a, +], Yali Zheng[a, +], Carmen C. Y. Poon[a, *], Dinggang Shen[b, c, *], and James Y. W. Lau[a]

[a]*Department of Surgery, The Chinese University of Hong Kong, Hong Kong*
rzhang, ylzheng, cpoon, laujyw@surgery.cuhk.edu.hk

[b]*Department of Radiology and Biomedical Research Imaging Center (BRIC), University of North Carolina, Chapel Hill, NC, United States of America*
dgshen@med.unc.edu

[c]*Department of Brain and Cognitive Engineering, Korea University, Seoul, Korea*

+ Authors contribute equally to this work
* Corresponding authors

Abstract

A computer-aided detection (CAD) tool for locating and detecting polyps can help reduce the chance of missing polyps during colonoscopy. Nevertheless, state-of-the-art algorithms were either computationally complex or suffered from low sensitivity and therefore unsuitable to be used in real clinical setting. In this paper, a novel regression-based Convolutional Neural Network (CNN) pipeline is presented for polyp detection during colonoscopy. The proposed pipeline was constructed in two parts: 1) to learn the spatial features of colorectal polyps, a fast object detection algorithm named ResYOLO was pre-trained with a large non-medical image