

Spherical Harmonics for Annotation-Free and Shape-Constrained 3D Cell Segmentation - Supplementary Material

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1 Introduction

Since the code for the proposed work is part of a bigger code base, this supplementary material includes code fragments for a demonstration of both, the synthesis and segmentation pipeline. Those demonstrations are provided as jupyter notebooks and as HTML files, which give an overview about the functionality without the need of setting up the python code. Due to size constraints, pre-trained model weights for the generative adversarial network could not be included, but the entire code base will be made publicly available on GitHub. The data included in the demonstrations are cropped from the data set published in [2] and available at <https://www.repository.cam.ac.uk/handle/1810/262530> [1]. The code was tested on Ubuntu 18.04.

References

1. Jonsson, S.H., Willis, L., Refahi, Y.: Research Data Supporting Cell Size and Growth Regulation in the *Arabidopsis thaliana* Apical Stem Cell Niche (2017), <https://www.repository.cam.ac.uk/handle/1810/262530>
2. Willis, L., Refahi, Y., Wightman, R., Landrein, B., Teles, J., Huang, K.C., Meyerowitz, E.M., Jönsson, H.: Cell Size and Growth Regulation in the *Arabidopsis Thaliana* Apical Stem Cell Niche. *Proceedings of the National Academy of Sciences* **113**(51), E8238–E8246 (2016)