

Lab Internship Summer 2019

Jaewoong Lee

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1 Introduction

1.1 Single Cell Analysis

1.2 T-Distributed Stochastic Neighbor Embedding

1.3 Single Cell Trajectory

2 Method

2.1 Cell Ranger

Cell Ranger is a set of analysis pipelines that process Chromium single-cell RNA-seq output to align reads, generate feature-barcode matrices and perform clustering and gene expression analysis. [Zheng et al., 2017]

2.2 Seurat

Seurat is an R package designed for QC, analysis, and exploration of single-cell RNA-seq data. Seurat aims to enable users to identify and interpret sources of heterogeneity from single-cell transcriptomic measurements, and to integrate diverse types of single-cell data. [Butler et al., 2018, Stuart et al., 2019]

2.3 Scikit-Learn

Scikit-Learn is a Python module for machine learning built on top of SciPy. [Pedregosa et al., 2011]

3 Result

3.1 tSNE Map

4 Discussion

5 Acknowledgment

References

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