

biostatistics

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Preface

1 Introduction

This is a book created from markdown and executable code.

See Knuth (1984) for additional discussion of literate programming.

```
1 + 1
```

```
[1] 2
```

Part I

Part II

2 parameterEstimation

3 parameter Estimation

4 hypothesisTesting

5 hypothesis testing

6

7 Regression analysis

7.1

7.2

7.3

8

9 Cluster analysis

10

11 Dimensionality reduction

11.1

11.1.1 Principal component analysis(PCA)

11.2

11.2.1 Uniform Manifold Approximation and Projection(umap)

2018 McInnes UMAP Uniform Manifold Approximation and Projection for Dimension Reduction UMAP t-SNE

- Riemannian manifold
-
-

t-SNE

McInnes, L, Healy, J, UMAP: Uniform Manifold Approximation and Projection for Dimension Reduction, ArXiv e-prints 1802.03426, 2018

11.2.2 t-Distributed Stochastic Neighbor Embedding (t-SNE)

t-Distributed Stochastic Neighbor Embedding (t-SNE) (PCA) t-SNE

t-SNE t-SNE t-SNE Kullback-Leibler KL)

t-SNE SNE SNE

t-SNE

-
- 2×3
-

<https://zhuanlan.zhihu.com/p/64664346>

11.2.2.1 t-SNE

Isomap LLE " " t-SNE MNIST

11.2.2.2 t-SNE

$O(n^2)$ PCA
 Barnes-Hut t-SNE $O(n \log n)$ sklearn method='barnes_hut'
 "Stochastic"
 PCA 50 t-SNE PCA sklearn init='pca'

12

13 Survival analysis

14 Summary

In summary, this book has no content whatsoever.

$1 + 1$

[1] 2

References

Knuth, Donald E. 1984. “Literate Programming.” *Comput. J.* 27 (2): 97–111. <https://doi.org/10.1093/comjnl/27.2.97>.