OmicsEdu

4/17/18
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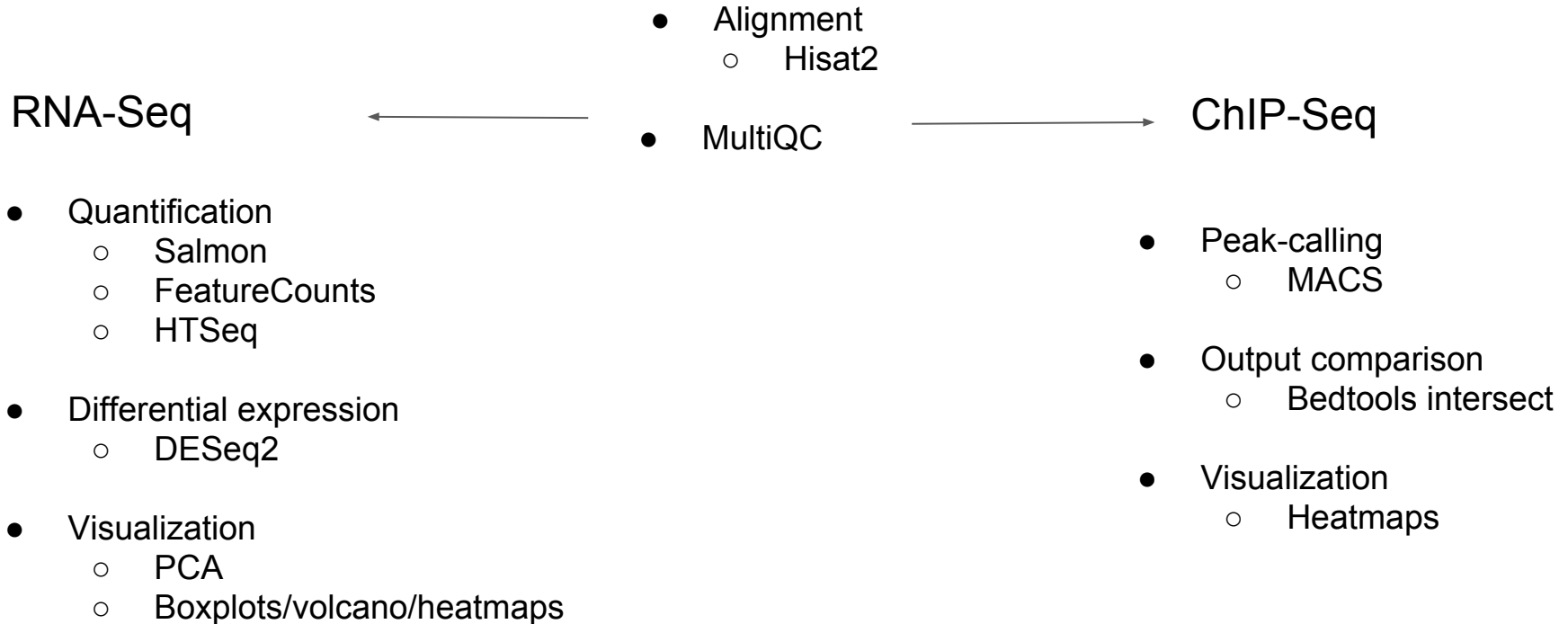Stephen Semick
Wanhu Tang

Difficulties

- Downloading data using EDirect
- Creating individual steps of ChIP-Seq and RNA-Seq

- Setup (installation)

- Download raw data
(separate for RNA-Seq and ChIP-Seq)

- Alignment
  - Hisat2

RNA-Seq ←   → ChIP-Seq

- MultiQC

- Quantification
  - Salmon
  - FeatureCounts
  - HTSeq

- Differential expression
  - DESeq2

- Visualization
  - PCA
  - Boxplots/volcano/heatmaps

- Peak-calling
  - MACS

- Output comparison
  - Bedtools intersect

- Visualization
  - Heatmaps

Gameplan

- Download everything
- Create workflow overview
  - Run each step individually
  - Put together in jupyter notebook
- Test, test, test
- Create wiki, website