OmicsEdu
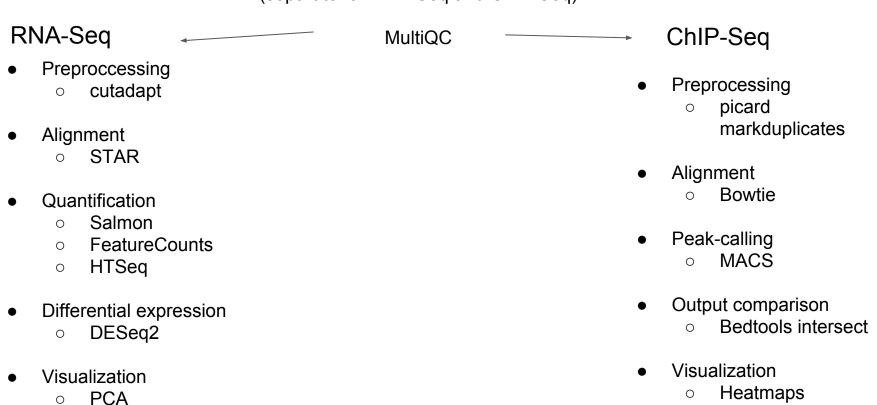
4/16/18
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Background

- Need to educate others
- RNA-Seq is hard
- Create a tutorial others can use
- RNA-Seq and ChIP-Seq analyses

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

RNA-Seq

MultiQC

ChIP-Seq

- Preproccessing
  - cutadapt

- Alignment
  - STAR

- Quantification
  - Salmon
  - FeatureCounts
  - HTSeq

- Differential expression
  - DESeq2

- Visualization
  - PCA
  - Boxplots/volcano/heatmaps of DE genes

- Preprocessing
  - picard markduplicates

- Alignment
  - Bowtie

- 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