

# GVA 2017 Review

Attempts to add perspectives and additional resources.

# Reminder of goals and thoughts of how well we met them.

- Participant goals:
  - Learn how to analyze my data, and have it fully analyzed by the end of the class.
  - Learn how to analyze NGS data in general.
- Teaching goals:
  - Teach the fundamentals of NGS variant analysis.
  - Provide context and exposure multiple types of data.
  - Use example commands to familiarize you with variety of programs.
  - Provide resources to enable you to do analysis you haven't thought of yet.

# Stages of NGS analysis

**1**

Biological  
Question

**2**

Design &  
Conduct  
Experiment

**3**

Prepare NGS  
Library &  
Sequence

**4**

Sequencing  
Analysis

## 4 Typical Stages of Variant Analysis

**1**

Read Quality  
Control

**2**

Map Reads

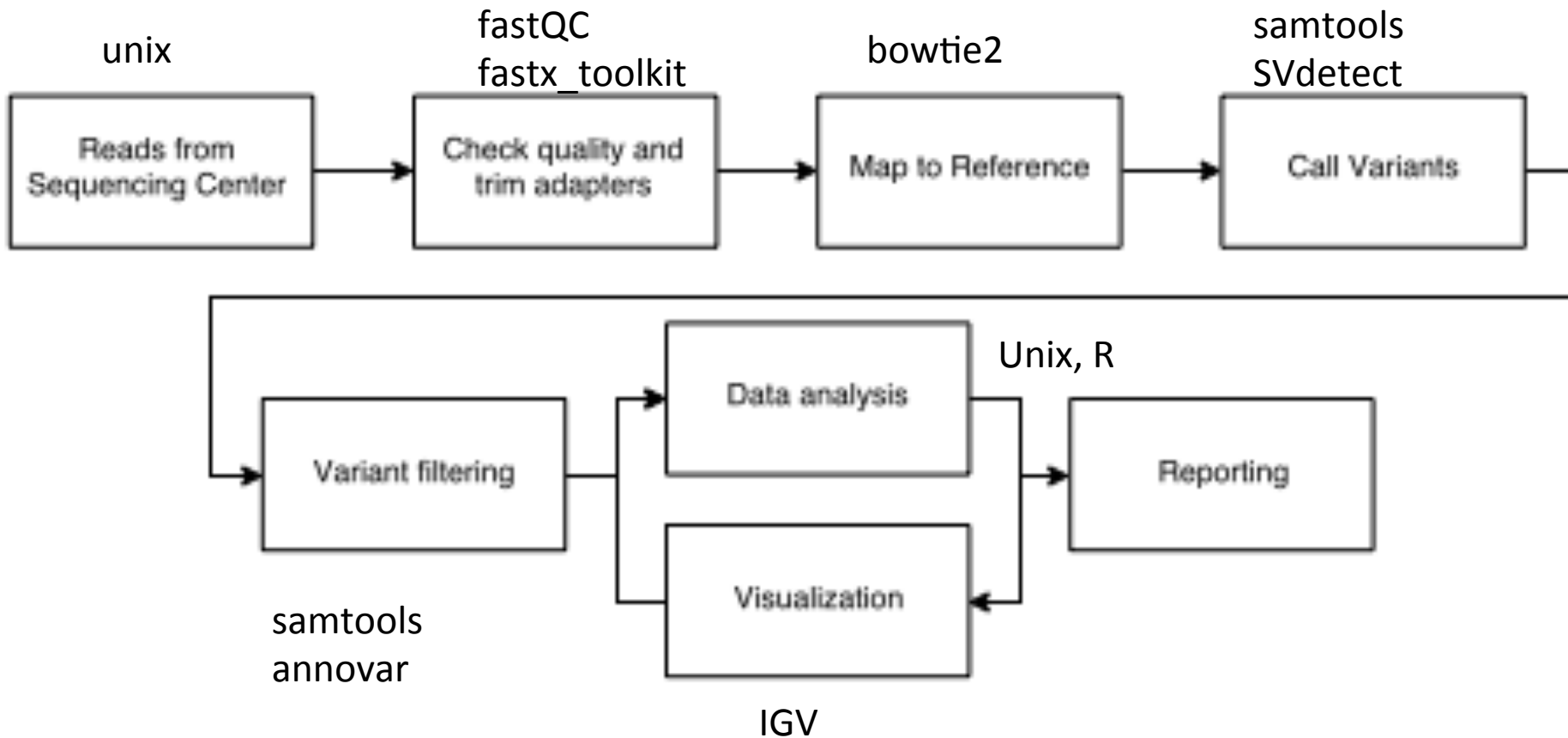
**3**

Identify Variants

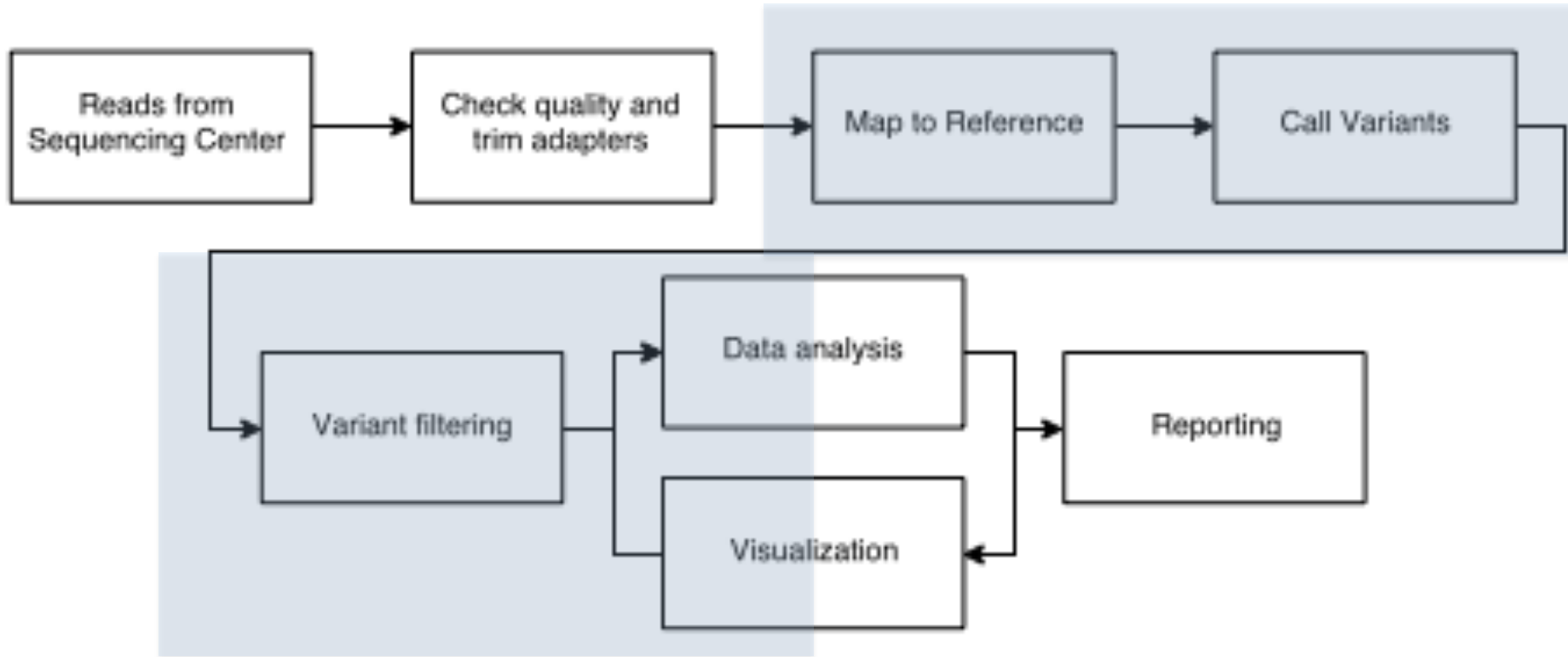
**4**

Visualize Variants

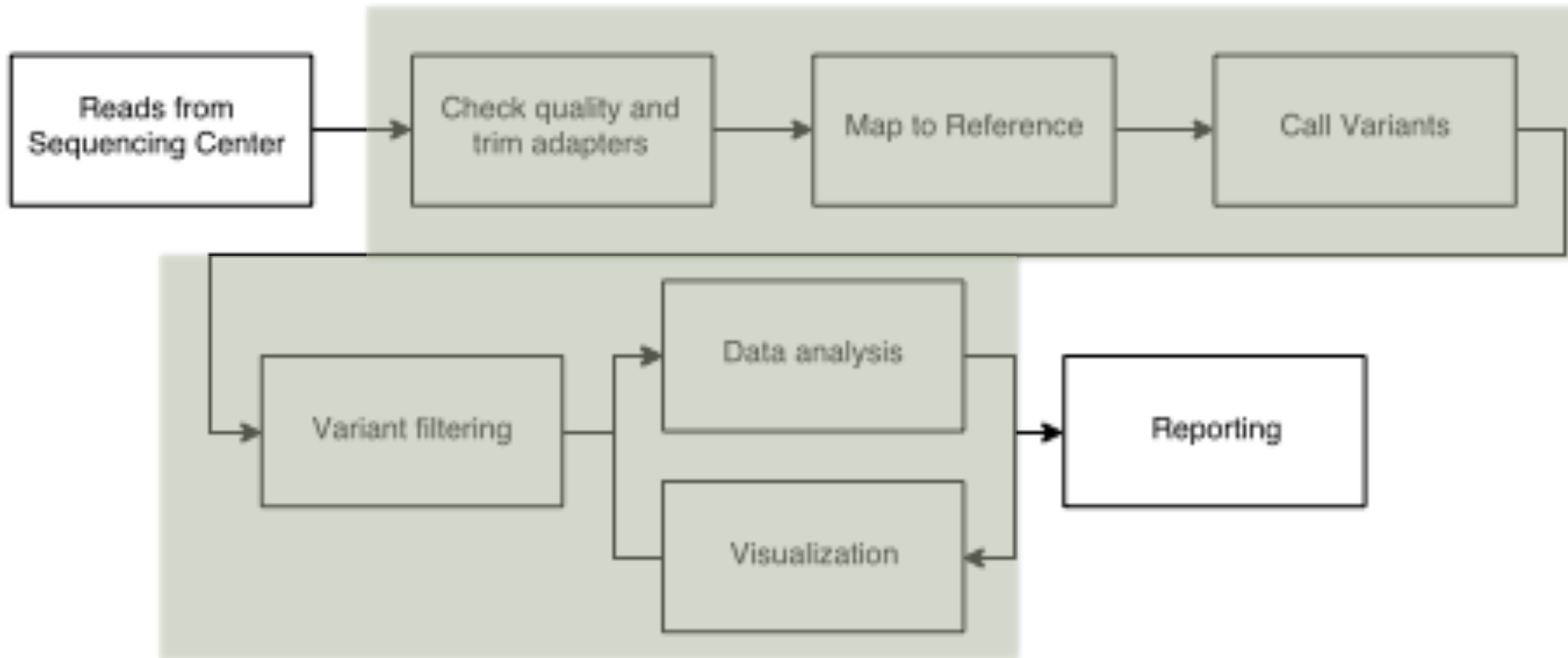
# Steps for GVA



# microbial all-in-one: breseq



# eukaryotic all-in-one: GATK



# Further Resources

## (online)

- Galaxy : <https://usegalaxy.org>
- Biolteam website (more tutorials, info from other classes):  
<https://wikis.utexas.edu/display/bioiteam/Home>
- Coursera: Genomic data science :  
<https://www.coursera.org/specializations/genomic-data-science>

# Further Resources (on campus)

- CCBB Short Courses (returning Fall 2017)
- Peer-led working groups (Fall and Spring)
- CCBB Open Coding Hour: Typically Wednesdays 4-5, MBB 2.232 (returning Fall)
- ut-open-coding-bio:
  - Slack group for access to local people for questions about all things computation.
  - <https://ut-open-coding-bio.slack.com/home>
  - Automatic joining from ut email addresses, contact me if you lack one.



# What's next

- Today, keep working on tutorials
  - Hint hint job submissions!
- Talk to us about what you don't understand about what we have done or why something was important or how it fits together.
- Keep eye out for email from me and from CCBB to review your experience, we LOVE feedback, it's the only way to make this better.
- Soon, start analyzing your own data.