

Bioinformatics Training

(in the context of a core)

Radhika Khetani

John Hutchinson & Shannan Ho Sui

Harvard Chan Bioinformatics Core

http://bioinformatics.sph.harvard.edu/

HBC Harvard Chan Bioinformatics Core

Focus on Next-Generation Sequencing (NGS) data



Harvard Chan Bioinformatics Core

- Focus on Next-Generation Sequencing (NGS) data
- Consulting/Analysis services use a fee-for-service model
 - Different types of subsidies available for specific groups based on internal funding





Harvard Chan Bioinformatics Core

- Focus on Next-Generation Sequencing (NGS) data
- Consulting/Analysis services use a fee-for-service model
 - Different types of subsidies available for specific groups based on internal funding
- Training Program is fully subsidized by internal funding assigned FTE for "dedicated" training personnel



Interplay between Training and Consulting



- Current best practices,
- New technologies,
- Workshop topic selection

Four person teaching team

- Four person teaching team
- Topics include basic data skills and analysis of NGS data

- Four person teaching team
- Topics include basic data skills and analysis of NGS data
- On average, team members spend 66% time on training-related activities and rest is on analysis/consults.

- Four person teaching team
- Topics include basic data skills and analysis of NGS data
- On average, team members spend 66% time on training-related activities and rest is on analysis/consults.
 - ◆ Usually, 3 hands-on workshops a month => ~3.5 to 5 days/month

- Four person teaching team
- Topics include basic data skills and analysis of NGS data
- On average, team members spend <u>66%</u> time on training-related activities and rest is on analysis/consults.
 - ◆ Usually, 3 hands-on workshops a month => ~3.5 to 5 days/month
 - ◆ Team members work with faculty on teaching for-credit, graduate-level courses (~2-3 courses annually)

- Four person teaching team
- Topics include basic data skills and analysis of NGS data
- On average, team members spend <u>66%</u> time on training-related activities and rest is on analysis/consults.
 - ◆ Usually, 3 hands-on workshops a month => ~3.5 to 5 days/month
 - Team members work with faculty on teaching for-credit, graduate-level courses (~2-3 courses annually)
 - Additional time spent on material development, organization, administration, outreach, community building

Training goals and method highlights

Training focused on enabling participants to-

- Utilize best practices for experimental design and data analysis
- Analyze their own data more independently
- Revise concepts well after the workshop/course

Training goals and method highlights

Training focused on enabling participants to-

- Utilize best practices for experimental design and data analysis
- Analyze their own data more independently
- Revise concepts well after the workshop/course

Methods highlights-

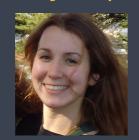
- Small class sizes 25 participants on average with 3 instructors
- Incoming students at similar level of computational skills (not enforced)
- Use of local research computing resources for continuity
- Easily updatable and accessible training/learning materials on GitHub

Acknowledgements and Contact Information

Thanks to all the members of the core, especially the training team:

Meeta Mistry & Mary Piper!





Contact information-

Webpage: bioinformatics.sph.harvard.edu Training Materials: hbctraining.github.io/main

: hbctraining@hsph.harvard.edu Personal : rkhetani@hsph.harvard.edu

💓 : <u>@bioinfocore</u> Personal 💓 : <u>@rs_khetani</u>