HB HackBio

A simple guide

Duration: 5 weeks

Eligibility: Open, No restrictions

Cost: Free

Requirements: A PC and a workspace

ABOUT THE INTERNSHIP

HackBio is a virtually regimented research internship that is practice oriented and focused on equipping African scientists with advanced bioinformatics and computational biology skills. By the end of internship, successful interns should have:

- Honed their skills in a specific bioinformatics method
- Have at least a peer-reviewed article to show for the internship experience

GOALS

1. Expand the bioinformatics capabilities of African scientists
2. Improve networking among young African scientists
3. Accelerate bioinformatics discoveries in Africa
4. Increase public understanding of biological science and its implications for our world

HOW IT WORKS

- There are 5 rigorous and research intensive stages in the internship, Stages 0-4.
- The internship is free of cost, no entry cost, exam or interview is required. Only your commitment is required
- We expect that even a complete novice who is ready to learn-on-the-go should successfully complete the internship through

active learning, collaboration and networking.

- The internship is completely virtual, no on-site presence is required.
- Each intern is expected to pick one **BIOSTACK** while registering for the internship. It can be changed until stage 1 is completed.
- Open sessions with mentors and sponsors on best practices and research/study opportunities will be provided from time to time
- Eliminated candidates at each stage will be provided with some general information on what they can do to improve on themselves
- Mentors are quite experienced in their fields and are to be respected when they give instructions. They are empowered to revoke your status as an intern if found wanton.
- Finally, try as much as possible to be friendly to everyone, collaborate, network and build academic relationships all over Africa, who knows, your interaction can be the next big thing in the world.

ABOUT THE STAGES

- **STAGE 0**: Pruning those that are complete novice and are not ready to learn-on-the-go. Simple tasks (3 days)
- **STAGE 1**: Achieve digital collaboration with common tools among participants; anyone who is unable to collaborate will be eliminated (4 days)

- **STAGE 2***: Distribution of individuals into different biostacks, as it applies to the theme. Preliminary tasks on usage of software, linux environment and basic language debugging. (1 week; 60 persons scale through and enter stage 2)
- **STAGE 3***: Reshuffling of individuals into 5 teams and assignment of the 5 projects. All participants who get to this stage will receive a badge of honor. (1 week; 40 persons scale through and enter stage 4)
- **STAGE 4**: Submission of all results in their raw form, all codes, designs and final manuscript draft ready for submission.

ABOUT THE BIOSTACKS

"BIOSTACK" is just our fancy word for areas of specialization and applications in bioinformatics. They include:

- genomics
- drug development
- vaccine informatics
- medicinal chemistry
- cheminformatics
- data analytics
- software development
- science communication
- publication image design
- bioinformatics frontend/UI/UX

LIST OF COLLABORATION TOOLS

- **Slack**
- GitHub
- Google Account
- Figma
- **R cloud**
- Cloud Computing resources
- Jupyter cloud
- **UNIX environment (Putty for windows)**

Bold: Must be installed locally on your PC

Green: No installation, just an account.

USING OUR SLACK WORKSPACE

A 30 minutes onboarding call will be provided on how to use the workspace. However, if for anything, you forget the instructions, kindly refer to this guide:

- Use a simple but unique username on the workspace throughout the internship
- Do not **abuse** anyone in any form. Respect is the keyword here.
- Share only materials that you are sure have open access licenses
- Update your tag as soon as you are promoted to the next stage.
- We strongly discourage the use of any messenger platform apart from slack. Virtually all you need is

available on slack (chat, private channel, storage, emojis, polls, threads). We are not responsible for any abuse or insult that may arise from any external platform.

ABOUT OUR SLACK CHANNELS

- #hackbio-office: Company-wide announcements and work-based matters
- #introduction: Introduce yourself here, make new friends, naturally, do not abuse anyone. Keep it official
- #random: Non-work banter and water cooler conversation
- #resources: Inspire someone, help someone, share something
- #journal-club: Use /pubmed and discuss recent articles in your field
- #bode-thomas: The only road that leads you home (Inspired by Master KG's Skeleton Move; South Africa). You don't want to be here.

Contact

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