INTERNATIONAL VIRTUAL WORKSHOP ON HUMAN GENOMICS AND BIOINFORMATICS.

Mastering Biopython for Precision Medicine and Human Genomics, Delving into Cutting-Edge NGS Data Analysis and Revolutionary Insights into Cancer, Diabetes, and Beyond.

CURRICULUM

WEEKS	DAYS	CURRICULUM
WEEK 1	MONDAY	· Introduction to Biopython: Familiarize with Biopython, a powerful Python package for biological computing and analysis.
	TUESDAY -THURSDAY	· Hands-on Case Study/Assignment: Apply your Biopython skills to hands-on projects and case studies, tackling real-world challenges in precision medicine and human genomics.
	FRIDAY	· Data Collection from NCBI Database: Gather reference data of vascular cells from relevant case studies such as cancer and diabetes from the NCBI database. · Quality Control: Conduct library quality checks using Fastqc to assess the quality of raw sequence data. · Quality Control: Trim and filter raw sequence data using Trimmomatic to remove low-quality reads and correct any sequencing errors.
WEEK 2	MONDAY	· Reference Guided Assembly: Map reads from type 2 diabetic patients to reference data of vascular cells from relevant case studies such as cancer and diabetes. · Reference Guided Assembly: Facilitate accurate identification of somatic mutations present in the vascular cells by aligning reads to the reference data.
	TUESDAY -THURSDAY	· Hands-on Case Study/Assignment: Apply your Biopython skills to hands-on projects and case studies, tackling real-world challenges in precision medicine and human genomics.
	FRIDAY	· Somatic Mutation Calling: Use Burrow Wheelers Alignment for alignment of reads to detect specific genetic alterations in vascular cells. · Somatic Mutation Calling: Identify single nucleotide variants (SNVs), insertions, deletions, and structural variants.
WEEK 3	MONDAY	· Copy Number Variation Detection (hCNV): Homogenize mapped reads to prepare for copy number variation detection. · Copy Number Variation Detection (hCNV): Filtrate indels to increase accuracy and reliability of detection results.
	TUESDAY -THURSDAY	· Hands-on Case Study/Assignment: Apply your Biopython skills to hands-on projects and case studies, tackling real-world challenges in precision medicine and human genomics.
	FRIDAY	· Annotation and Functional Analysis of Somatic Mutations: Utilize Biopython for variant annotation and effect prediction. · Annotation and Functional Analysis of Somatic Mutations: Interpret the biological significance of detected variants.
WEEK 4	MONDAY	· Visualization of Results: Use Python statistical packages for visualizing the results of the analysis. · Finalize analysis, document findings, and prepare presentation or report.
	TUESDAY - THURSDAY	· Hands-on Case Study/Assignment: Apply your Biopython skills to hands-on projects and case studies, tackling real-world challenges in precision medicine and human genomics.
	FRIDAY	· Final Review: Summarize key learnings and insights from the workshop. · Certificate Distribution: Receive a certificate of completion for mastering Biopython in precision medicine and human genomics.

OUTCOME

By the end of the workshop, participants will:

Embark on a journey of mastering Biopython for precision medicine and human genomics in this comprehensive workshop! Designed to empower participants with practical skills and knowledge, this workshop covers the fundamentals of Biopython programming and explores its applications in precision medicine and human genomics research.

01.

Have a thorough understanding of Biopython programming and its applications in precision medicine and human genomics.

02.

Acquire practical skills in genomic data analysis, interpretation, and application using Biopython libraries and tools.

03.

Gain insights into the role of Biopython in advancing precision medicine research, personalized treatment strategies, and disease risk assessment.

04.

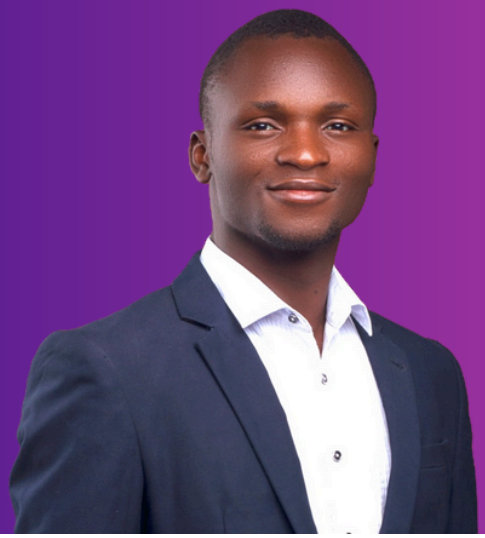
Connect with peers, mentors, and industry experts to foster collaboration and knowledge exchange.

05.

Receive a certificate of participation, validating their commitment to mastering Biopython for precision medicine and human genomics.

Don't Miss Out on this Opportunity to Master Biopython for Precision Medicine and Human Genomics! Reserve Your Spot Today!

The Message From Our CEO



Let's Navigate Success, Together!

Oluwaseyi Olawale, CEO of GENOMAC HUB, leads groundbreaking biotech solutions worldwide. Expert in bioinformatics, pioneering research in African plants, AI, and peptides for global health challenges.

Charting a Path to Genomic Excellence

Attention aspiring scientists and genomic enthusiasts! Are you ready to embark on a journey that fuels your passion for discovery and opens doors to exciting career opportunities? In the dynamic field of precision medicine, where innovation meets impact, the possibilities are limitless - and the rewards are substantial.

Imagine yourself at the forefront of a transformative movement, where your expertise in Biopython and genomic analysis propels you into a realm of cutting-edge research and groundbreaking discoveries. In precision medicine, skilled professionals are not only in high demand but also generously compensated, with salaries ranging from $70,000 to over $150,000 per year.

But it's not just about the paycheck - it's about the thrill of discovery, the satisfaction of making a difference, and the opportunity to shape the future of healthcare. With Biopython as your toolkit and precision medicine as your canvas, you'll have the chance to tackle some of the most pressing challenges in human health, from decoding the mysteries of cancer and diabetes to uncovering novel insights into neurodegenerative diseases and beyond.

Join us as we embark on a journey of innovation, inspiration, and limitless possibilities. Reserve your spot today and take the first step towards a future where your talents are valued, your impact is profound, and your career knows no bounds.

Oluwaseyi Olawale
The CEO of GENOMAC HUB.

More Information About Us

Empowering Tomorrow's Innovators

GENOMAC HUB: Spearheaded by a visionary team of experts, this thriving biotech startup stands at the forefront of innovative research and development. With a mission to tackle pressing global health challenges, the company specializes in harnessing the potential of nature and cutting-edge technology through integrative R&D.

Boasting a remarkable outreach, GENOMAC HUB has empowered and trained over 16,000 life scientists across five continents, imparting specialized knowledge in bioinformatics disciplines. Notable initiatives include groundbreaking research on African medicinal plants for conditions like Diabetes, Hemorrhoids, and Diarrhea, as well as leveraging Bioinformatics and Artificial Intelligence to combat antimicrobial resistance. Additionally, the company focuses on the development of novel therapeutic peptides against targeted infections and diseases.

Contact Us :

Phone Number
+2348077191794

Email Address
info@genomachub.com

Office Address
Genomac hub, beside Alari Akata filling station, Under g, Ogbomoso, Oyo, Nigeria