

**Integrated Disease Surveillance Programme
National Centre for Disease Control
(Directorate General of Health Services)
Ministry of Health & Family Welfare
Government of India
22, Sham Nath Marg, Delhi-110054**

Vacancy notice at CSU, IDSP, NCDC

A 3 Stage selection Process (Screening, Shortlisting, *Written test and Interview) for (01) Sr. Public Health Specialist, (01) Public Health Specialist, (01) Microbiologist, (01) Data Manager, (01) Media Manager, (01) Risk Communication Expert, (01) Documentation Specialist, (01) Bio Statistician, (02) Bio Informatics specialist, (01) Data Scientist, (02) Training Manager, purely on contract basis in Central Surveillance Unit of Integrated Disease Surveillance Programme under PM-ABHIM at NCDC, Delhi. The initial tenure will be up to March 2026, with the possibility of extension on a yearly basis.

Selection Procedure:

The Candidates are required to submit their Resume along with Application form on Email –id mentioned below by *tentative third/fourth week of October*.

Email I'd: shoc.idsp@ncdc.gov.in

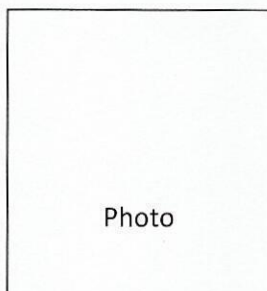
Candidate must ensure their eligibility as per Terms of Reference (TOR) before applying. The Application form can be downloaded and detailed advertisement can be viewed at website www.idsp.mohfw.gov.in, and www.ncdc.mohfw.gov.in

Terms & Conditions:

- A. Only shortlisted candidates will be invited for written/ Interview Process.
 - * Written test will be conducted in case the number exceeds more than 10 candidates per post.
- B. No TA/DA will be admissible for attending the written/ Interview Process.
- C. Candidates must bring all the original certificates including experience certificates for the verification process. Candidates without original documents will not be permitted to appear in the interview.

Director

PERSONAL INFORMATION CUM REFERENCE FORM



Post Applied For: _____

Full Name : _____
(In BLOCK LETTERS)

Date of Birth : _____

Category : _____

Educational Qualification Relevant to the Terms of Reference (with %age obtained): _____

| Educational Qualification | Percentage Obtained |
|----------------------------------|---------------------|
| 10th | |
| 12th | |
| Bachelor's degree | |
| Master's degree | |
| Any other relevant qualification | |

Current/ Last Employment details: _____

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| Current Remuneration (in Rs./- per month) | | Relevant Work Experience (in yrs.) | |
| Expected Remuneration (in Rs./- per month) | | Notice Period: | |

Declaration: I hereby declare that all statements made in the application are true, complete and correct to the best of my knowledge and belief. I understand that in the event of any information being found untrue/false / incorrect or I do not satisfy the eligibility criteria, my candidature / appointment will be cancelled /terminated, without assigning any reasons thereof. I have read the contents of the advertisement and agree to abide by the rules, regulations and procedures for appointment to the post applied for.

Date: _____

Name: _____

Place: _____

Sign: _____

Terms of Reference for various posts proposed under various cells with regard to IHIP Expansion component of PM-ABHIM from IDSP division of NCDC

| Name of the Post with Justification | No. of Posts | Consolidated remuneration per month (Rs.) | Qualifications / Experience | Key Responsibilities |
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| <p>Sr Public Health Specialist</p> <p>Justification: “Given the global threat posed by influenza and its potential to trigger the next pandemic, establishing a robust and specialized surveillance cell is a national priority. The Senior Public Health Specialist will be the cornerstone of this initiative, providing the expertise and leadership required to effectively monitor, assess,</p> | 1 | 2,00,000 | <p>Essential: MBBS recognized by MCI with MD (Community Medicine/Preventive and Social Medicine/ Health Administration/ Community Health Administration) recognized by MCI/DNB with at least 15 years’ experience in the concerned Specialty after obtaining the Post-Graduate degree</p> <p>OR MBBS with Diploma in Public Health or Diploma in Tropical Medicine; or Diploma in Tropical Medicine and Hygiene or Diploma in Health Administration with 15 years’ experience in the Specialty of Public health/ Epidemiology / Preventive Medicine after obtaining the Diploma Must be Proficient in computer applications (MS- Word, Excel, and Power point)</p> <p>Desirable: Experience of working in public health</p> | <ul style="list-style-type: none"> Lead the establishment and operationalization of the Influenza and Special Surveillance Cell at the national level. Develop and implement strategic plans for influenza surveillance, focusing on early detection and response to emerging strains. Provide technical guidance and oversight for all activities related to influenza surveillance, control, and prevention. Coordinate with State Surveillance units, sentinel surveillance sites, and laboratory networks to ensure comprehensive and standardized data collection. Establish and strengthen partnerships with national and international stakeholders, including WHO, CDC, and other relevant agencies, to facilitate knowledge sharing and collaboration. Design and conduct training programs for public health professionals, laboratory staff, and other key stakeholders involved in |

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| and respond to influenza threats. Their extensive experience in respiratory virus surveillance is crucial for building a responsive, data-driven, and coordinated approach, which is essential to safeguard public health and prevent widespread morbidity and mortality.” | | /public health programme after obtaining post graduate degree; at least 10 years of working on Infectious Disease Surveillance specifically with regard to Influenza or Respiratory Viruses Surveillance | <p>influenza surveillance.</p> <ul style="list-style-type: none">• Mentor and guide Public Health Specialist, Assistant Public Health Specialist and microbiologists to build a skilled workforce capable of managing influenza outbreaks effectively.• Oversee the collection, analysis, and interpretation of epidemiological and laboratory data to identify trends, assess risk, and inform public health decision-making.• Ensure the timely submission of detailed reports to national health authorities and provide recommendations for public health actions based on surveillance findings.• Lead the development of standard operating procedures (SOPs), guidelines, and protocols for influenza testing, data reporting, and outbreak response.• Monitor and evaluate the implementation of these protocols to ensure consistent and accurate practices across the surveillance network.• Act as a key member of the Rapid Response Team during influenza outbreaks, providing expert guidance on containment and control measures.• Lead epidemiological investigations to |
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| | | | | identify the source of outbreaks and assess the effectiveness of interventions. |
| Public Health Specialist | | | <p>Essential: MBBS recognized by MCI with MD (Community Medicine/Preventive and Social Medicine/ Health Administration/ Community Health Administration) recognized by MCI/DNB with at least 3 years' experience in the concerned Specialty after obtaining the Post-Graduate degree</p> <p>OR MBBS with Diploma in Public Health or Diploma in Tropical Medicine; or Diploma in Tropical Medicine and Hygiene or Diploma in Health Administration with 5 years' experience in the Specialty of Public health/ Epidemiology / Preventive Medicine after obtaining the Diploma</p> <p>Must be Proficient in computer applications (MS- Word, Excel, and Power point)</p> <p>Desirable: Experience of working in public health /public health programme after obtaining post graduate degree</p> | <ul style="list-style-type: none"> • Expansion of the Influenza surveillance lab network and supporting the recognition of NCDC as the second National Influenza Centre (NIC-2) for India • Organize and monitor timely collection, compilation and analysis of surveillance data from all sentinel surveillance sites for Influenza and take appropriate action and give feedback. • Regular field visits for monitoring the activities. • Supervising, monitoring and training of the nodal officers. • Initiate and guide field investigations promptly following the Standard Operating procedures. • Coordinate regular meetings of key strategic stakeholders, lab partners and potential vertical program collaborations and assist in inter-sectoral coordination. • To analyse and use the data to develop scientifically sound conclusions—which can then be the basis for policy. • Monthly performance report to be prepared for appraisal. • Performing other duties as required in the interest of the programme and any other work/activity assigned from time to time. |

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| efforts during outbreaks, the specialist plays a critical role in controlling the spread of disease and safeguarding public health." | | | | |
| <p>Microbiologist</p> <p>Justification: "The Microbiologist position is essential for guiding laboratory investigations at influenza sentinel sites, ensuring standardized and accurate testing across the network. With expertise in influenza testing strategies, this role is pivotal in enhancing the skills and capacity of microbiologists nationwide. Additionally, the Microbiologist oversees the implementation of</p> | 1 | 1,25,000 | <p>Essential: MBBS with MD/DNB in Medical Microbiology/ Lab Medicine from Govt. Recognized by MCI/DNB; and minimum three years' experience of working in clinical microbiology laboratory services/public health program after obtaining the post graduate degree.</p> <p>OR</p> <p>Master of Science (MSc) in Medical Microbiology/Microbiology/ Biotechnology/Biomedical Sciences; with Doctor of Philosophy (PhD) in Medical Microbiology/Microbiology/ Biotechnology/ Biomedical Sciences; and minimum five years' experience of working in clinical microbiology laboratory services/ public health program after obtaining the post graduate degree (PhD).</p> | <ul style="list-style-type: none"> • To work in newly proposed and approved National Public Health Laboratory to be established under IDSP and guide microbiologists/technicians at sentinel surveillance site level for laboratory investigations of Influenza. • Facilitate capacity building of laboratory professionals by organizing training programs. • To increase utilization of laboratory testing for Influenza surveillance. • Ensure implementation of Standard Operating Procedures (SOP) for laboratory techniques developed by special surveillance unit in all sentinel surveillance sites. • Ensure implementation of guidelines for Biomedical Waste Management developed by NCDC in all sentinel surveillance sites. • Ensure timely submission of weekly and monthly status report on laboratory tests carried out in sentinel surveillance sites. • Ensure linkages of sentinel surveillance sites with the IDSP/IHIP portal. |

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| standard protocols and ensures timely reporting, which is critical for effective surveillance and timely public health response.” | | | <p>Must be Proficient in computer applications (MS-Word, Excel, and Power point).</p> <p>Desirable: Experience of working in Infectious Disease surveillance especially with regard to Influenza / Respiratory Viruses surveillance after obtaining MD</p> | <ul style="list-style-type: none"> • Participate in epidemic investigations as member of Rapid Response Team (RRT) as and when required and provide support for sample collection and transport of specimens. • Liaise with medical college, private and other related sectors on issues related to laboratory diagnosis of Influenza. • Monitor Internal Quality Assurance and External Quality Assessment of sentinel surveillance sites with NPHL, NCDC. • Supervise through on-site visits and provide technical support to sentinel surveillance sites. • Supervise the referral lab network in States/UTs. • Undertake the various other activities including traveling to various laboratories under the project as required under the laboratory strengthening component • Monthly performance report to be prepared for appraisal. • The work shall include frequent travel to assigned sentinel surveillance sites. • Performing other duties as required in the interest of the programme and any other work/activity assigned from time to time. |
| <p>Data Manager</p> <p>Justification: The Data Manager</p> | 1 | 50,000 | <p>Essential:</p> <p>Graduate in Computer Applications from Govt. recognized institution.</p> <p>Computer Proficiency including M S Office</p> | <ul style="list-style-type: none"> • Oversee the collection, organization, and management of influenza surveillance data from various sources. • Conduct regular data cleaning and validation to |

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| <p>position is essential for maintaining high standards of data quality, accuracy, and timeliness in the Special Influenza Surveillance Cell, ensuring that public health decisions are based on reliable data. This role supports early detection of novel and highly pathogenic influenza strains by analyzing trends and patterns and providing actionable insights on seasonal influenza burden. Additionally, the Data Manager's coordination with state-level teams strengthens the overall surveillance system, promoting consistent reporting and rapid response capabilities across regions.</p> | | <p>word/ excel / power point, email, and internet. Experience of minimum 3 years in Data management preferably in public health sector. Desirable: Post graduate Degree Proficiency in statistical software (e.g., R, SPSS) and database management tools; familiarity with data visualization software is a plus.</p> | <p>ensure data quality, consistency, and reliability across reporting sites.</p> <ul style="list-style-type: none">• Implement data management protocols to maintain accurate records and facilitate easy retrieval of data for analysis and reporting.• Analyze surveillance data to identify trends, seasonal variations, and geographic distribution of influenza cases.• Conduct statistical analysis to assess the relative burden of influenza and detect early signs of novel or highly pathogenic strains.• Generate regular reports and visualizations, highlighting key findings on seasonal trends and risk indicators for stakeholders and decision-makers.• Work closely with state health departments and field teams to ensure timely and accurate data reporting, providing technical guidance on data collection and submission.• Conduct field visits as necessary to provide on-site support, troubleshoot data issues, and ensure adherence to surveillance protocols.• Facilitate training sessions for state and local surveillance teams on data reporting standards, data quality assurance, and relevant software tools.• Maintain organized documentation of all data management processes, including data entry protocols, data cleaning procedures, and analytical methods. |
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| | | | | <ul style="list-style-type: none"> • Ensure that records of data submissions, reporting timelines, and any discrepancies are meticulously kept for accountability and audit purposes. • Provide training and technical support to field staff on data collection tools, quality assurance practices, and troubleshooting common data issues. • Stays updated on best practices in data management and apply these techniques to improve data handling within the Special Influenza Surveillance Cell. |
| <p>Training Manager</p> <p>Justification: “This position focuses on developing human resources by training Surveillance Officers, Rapid Response Teams, and other staff on disease surveillance, epidemiology, and data management. The Training Manager at CSU-IDSP connects CSU and SSUs, gathers training needs, coordinates with training institutes, and manages the</p> | 2 | 75,000 | <p>Essential: Graduate with MBA in HRD or PG diploma in HR with 3 years of experience in organising trainings/event management</p> <p>Desirable: Advanced degree in Public Health or epidemiology with Proven experience in curriculum design, training program management, and capacity building, particularly in public health or epidemiology</p> | <ul style="list-style-type: none"> • Plan and execute the trainings for MSU staff, Routine trainings under IDSP-IHIP, Stakeholder consultations, P & L form application use trainings, PHEDM, PHEM fellowship and the proposed 24x7 NCDC helpline operators • Coordinate with other training programmes of NCDC • Review existing trainings under the project for Health personnel and other associated staff. (Project trainings, Trainings in Epidemiology, Orientation workshops of Health personnel regarding project activities and others) • Identifying institutions for training of various categories of personnel, based on selection criteria of IDSP. • Collate and review training plans submitted by each State • Organize development, publication and dissemination of training manuals for various training courses |

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| <p>IDSP human resource database, especially as new surveillance units and technologies emerge. Two positions are proposed as it is expected that combined training load of CSU, State, District and Sub district level can only be managed by 2 training managers.”</p> | | | | <ul style="list-style-type: none"> • Monitor training activities in various States • Monitor expenditure incurred on training and related activities • Plan, organize and execute independent evaluation of training and its outcome • Development of training curriculum and manuals for various training courses • Support and Monitor the training activities of the programme at State level. • Monthly performance report to be prepared for appraisal. • Performing other duties as required in the interest of the programme and any other work/activity assigned from time to time. |
| <p>Media Manager</p> <p>Justification: “The Media Manager is essential for coordinating communication efforts, enhancing NCDC’s public visibility, and showcasing its achievements in public health. This role manages NCDC’s social media and YouTube presence, overseeing content creation, digital</p> | 1 | 75,000 | <p>Bachelor’s degree in Communications, Journalism, Public Relations, or related field, with experience in media relations and public health communication.</p> <p>Strong writing, editing, and digital media skills, with experience in managing social media for health communication.</p> | <ul style="list-style-type: none"> • To conduct Community Need Assessment (CNA) for information about target disease. • Development of communication/IEC strategies based on Community Need Assessment. • Development and dissemination of prototype materials for communication through various media including social media modes • Development of Monitoring and evaluation tools to assess the behavioural changes among the people regarding diseases surveillance • To develop liaison with Government partners, Community Based Organizations, NGOs etc. for improving the visibility of the project. • Preparation and compilation of progress reports and other relevant documents for further use. • Development of suitable audio-visual communication materials like radio slot, television |

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| engagement, and innovation to expand outreach and effectively communicate NCDC's mission to a broad audience." | | | | <p>spot and print.</p> <ul style="list-style-type: none"> • Monthly performance report to be prepared for appraisal • Liaisoning with other stakeholders like DAVP, NSD, etc. • Any other work / activity assigned from time to time. |
| <p>Risk Communication Expert</p> <p>Justification: "The Risk Communication Expert is essential for creating and executing effective communication strategies that prevent and control disease outbreaks by blending scientific expertise with strategic messaging. This role ensures timely and accurate dissemination of risk information across multiple channels and languages, working closely with the communication officer and training manager to enhance public health</p> | 1 | 75,000 | <p>Master's degree in Social Sciences or Behavioural Sciences or Communications or Public Health from recognized University with at least two years' experience in national Health programmes</p> | <ul style="list-style-type: none"> • The primary responsibility of the expert is to ensure that scientifically correct and socially acceptable messages for outbreak prevention and control are delivered in a timely manner and through appropriate medium to the target population. • Develop and maintain standing risk communication capacity in the NCDC. • Oversee the development, elaboration and implementation of the risk communication plan as part of the health response operations. • Support national authorities to convene stakeholders and co-develop a national risk communication strategy and plan. • Liaise closely with the HQ and regional counterparts for risk communication ensuring coherence of strategy, materials and messages • Liaise closely with the HQ and crucial counterparts for risk communication ensuring coherence of strategy, materials and messages during outbreaks and emergencies • Develop a multi-hazard risk communication plan with internal and expert input and working in line with national and global frameworks and strategies, • Map and engage risk communication stakeholders; |

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| responses.” | | | | <p>establish and sustain coordination mechanisms for emergency risk communication.</p> <ul style="list-style-type: none"> • Map preferred channels of communication in the country with focus on vulnerable groups. • Organize risk communication training for NCDC and other key stakeholder’s staff. • Support national authorities to conduct lessons learnt exercises to further strengthen emergency risk communication. • Undertake field visits whenever required. |
| <p>Documentation Specialist</p> <p>Justification: “The Documentation Specialist is essential for ensuring that all public health activities, data, reports, and policy changes are accurately recorded, updated, and archived, supporting compliance and effective knowledge sharing. This role will optimize information management, reduce paper usage, drive digitalization, and enhance operational</p> | 1 | | <p>Bachelor’s degree in Documentation, Public Health, Library Science, or a related field, with experience in documentation, record-keeping, and reporting.</p> <p>Proficiency in documentation tools, data organization, and creating structured reports, with attention to detail and accuracy.</p> | <ul style="list-style-type: none"> • Create a comprehensive plan for managing both digital and physical documents, including version control and archival procedures. • Ensure accurate and up-to-date documentation of public health data, project reports, and policy changes. • Work closely with data scientists, public health experts, and IT staff to gather and document necessary information. • Establish and enforce documentation standards to ensure consistency and quality across all materials. • Facilitate the flow of information within the organization by overseeing the distribution of documents and guiding staff on best practices. • Review and edit documents for accuracy, clarity, and relevance before publication or dissemination. • Provide training sessions for staff on documentation procedures and the use of document management systems. |

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| efficiency, ultimately contributing to the organization's mission of safeguarding community health." | | | | <ul style="list-style-type: none"> • Monitor compliance with legal and organizational standards, ensuring the security and confidentiality of sensitive documents. • Undertake field visits whenever required. <p>Undertake other assignments, which may be assigned from time to time by the reporting authority.</p> |
| <p>Bio Statistician</p> <p>Justification: "The Biostatistician is crucial for analyzing complex epidemiological and genomic data, identifying patterns and correlations that inform risk factors and outbreak response. Their expertise ensures data accuracy and consistency, supporting evidence-based public health interventions."</p> | 1 | 75,000 | <p>Essential:</p> <ul style="list-style-type: none"> • PhD in Statistics or • Masters in Biostatistics with 2 years' experience in health sector or • Masters in Statistics with 2 years' experience in health sector <p>Desirable:</p> <ul style="list-style-type: none"> • Advanced degree in Biostatistics, Epidemiology, or related field with expertise in statistical software (e.g., R, SAS, STATA). • Experience in epidemiological study designs, disease modelling, and public health data analysis. • Experience of conducting / participating in large scale quantitative health research studies or working with health programmes / Experience of preparing Health reports, scientific papers and presentations / Publications in peer reviewed journals | <ul style="list-style-type: none"> • Develop and apply sophisticated statistical models to evaluate correlations between environmental exposures and genetic factors, contributing to understanding the drivers of disease spread and risk. • Utilize time-series and regression analysis techniques to identify emerging patterns, trends, and deviations in disease incidence and transmission. • Establish quality assurance protocols for data collection, validation, and management, ensuring high integrity and reliability of data across sites and databases. • Conduct routine data audits to identify inconsistencies, provide feedback, and recommend corrective actions to collaborating field staff and lab partners • Create standardized templates for data input and analysis compatible with widely-used statistical software (e.g., R, SAS, STATA), accessible to state health officers, data managers, and laboratories. • Design templates for consistent analysis of data |

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| | | | | <p>across locations and support visualization of results for ease of interpretation.</p> <ul style="list-style-type: none">• Compile weekly, monthly, and quarterly reports by district, state, and laboratory, presenting data in both tabular and graphical formats to highlight trends and emerging risks.• Prepare analytical reports and visual dashboards that communicate key findings effectively to public health officials and policymakers.• Lead training sessions for local health officers and data managers on statistical best practices, data management, and interpretation of epidemiological findings.• Provide statistical guidance and mentoring to support local analysis efforts, enabling decentralized, timely decision-making.• Collaborate with other cell members on research projects, contributing to scientific publications, presentations, and reports.• Support epidemiologists and policymakers by offering statistical interpretations that clarify the public health implications of research findings. |
| <p>Bio Informatics specialist</p> <p>Justification: "Bioinformatics Specialists are essential for</p> | 2 | 75,000 | <p>Essential:</p> <p>Master degree (M. Tech/ M. Sc/ MS) in Bioinformatics or Biotechnology /Life Scienceswith specialization in Bioinformatics from a recognized</p> | <ul style="list-style-type: none">• Utilize bioinformatics tools to process raw genomic data, including sequence alignment, assembly, and annotation to identify specific genetic mutations or variants associated with disease transmission.• Conduct comparative analyses of pathogen sequences to study evolutionary trends, detect |

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| <p>processing and interpreting genomic data to track pathogen evolution and detect emerging variants, enabling precise surveillance. They integrate genomic with epidemiological data to reveal interactions that affect disease transmission and inform control strategies. With variety and quantum of data required to be processed, two Bio Informatics Specialists would be required”</p> | | <p>University. At least one year experience after M. Tech / MS degree or 3 years after M. Sc degree in the field of bioinformatics as evident from publications in scientific journals of high international reput</p> <p>Desirable:</p> <p>Candidate holding Post Doc in Bioinformatics</p> <p>Candidate holding PhD degree on a relevant topic related to any of the above field from a recognized University will be given preference.</p> <p>Research and development of various bioinformatics tools to study, analyze and interpret data related to laboratory-based studies on infectious diseases. Molecular modelling as applied to molecular biology and genetics of infectious diseases or other similar areas related to bioinformatics of human diseases.</p> | <p>emerging variants, and assess their potential impact on transmissibility and virulence.</p> <ul style="list-style-type: none">• Merge genomic data with epidemiological, clinical, and environmental datasets to provide insights into gene-environment interactions that could affect disease susceptibility and severity.• Evaluate genetic markers in conjunction with exposure data to understand risk factors and susceptibility across different populations and regions.• Develop and maintain scalable, reproducible workflows for processing high-throughput genomic data, ensuring streamlined and standardized data handling.• Optimize pipelines for quick data processing, allowing real-time insights into pathogen dynamics for public health surveillance.• Systematically track variants, evaluating their potential impact on public health.• Analyze pathogen evolution to inform vaccine and therapeutic strategies, especially focusing on mutation trends that may influence vaccine effectiveness or drug resistance.• Create user-friendly databases and visualization tools that allow other health specialists to easily access, explore, and interpret genomic data.• Develop analytical tools that can integrate both genomic and non-genomic data to enhance the usability of genomic findings in broader epidemiological studies.• Provide bioinformatics training and guidance to health professionals and lab staff, enhancing genomic surveillance capabilities. |
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| | | | | <ul style="list-style-type: none"> Act as an expert advisor for troubleshooting data processing issues and interpreting complex bioinformatics outputs for effective decision-making. |
| <p>Data Scientist</p> <p>Justification: “The Data Scientist provides advanced data integration and predictive modelling to forecast disease trends and guide outbreak management. Their expertise in machine learning and data visualization supports timely, actionable insights for effective public health responses.”</p> | 1 | 1,50,000 | <p>Essential: Advanced university degree (Master's level) in data science, epidemiology, demography, statistics, health sciences, Master of computer application or a related discipline that includes quantitative methods.</p> <p>Desirable: PHD in any of the above areas.</p> <p>Experience:</p> <p>Essential: At least 7 years of experience in advanced data analysis, including modeling and machine learning, developing and using quantitative methods in infectious diseases. Experience in conducting joint analysis, sharing code on different platforms and documenting outcomes. Experience in visualizing the results. Demonstrated exposure at international level.</p> <p>Desirable: Experience in carrying out analysis in a federated setup. Technical experience with graph-based analysis. Experience in working with infectious disease surveillance data.</p> | <ul style="list-style-type: none"> Coordinate the integration of genomic, environmental, epidemiological, and clinical datasets to create comprehensive, multi-source databases for in-depth analysis. Oversee data cleaning and preprocessing to ensure quality and consistency across datasets from various sources and formats. Develop machine learning algorithms and predictive models to forecast epidemic trends, such as outbreak peaks, geographic spread, and potential high-risk areas. Use advanced statistical and machine learning techniques (e.g., spatial analysis, federated analysis, graph-powered analysis) to identify patterns in disease spread and assess transmission dynamics. Design and implement automated pipelines for processing, analyzing, and visualizing epidemiological data, making real-time insights available to stakeholders. Continuously refine these pipelines to incorporate new data, tools, or methods as they become available, maintaining state-of-the-art capabilities. Create dashboards, heat maps, and interactive tools that visualize data in real-time, making it accessible and actionable for public health professionals. Present data in user-friendly formats that facilitate rapid interpretation and decision-making, emphasizing key findings, trends, and actionable |

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| | | | | <p>insights.</p> <ul style="list-style-type: none">• Systematically document all code, workflows, and analytical approaches to ensure transparency and reproducibility of results.• Develop strategies for sharing data and insights within the organization and with external collaborators, fostering a culture of openness and interdisciplinary cooperation• Design and implement monitoring systems to maintain data quality across all stages of data collection, processing, and analysis.• Conduct regular evaluations of models and pipelines, making adjustments as necessary to improve accuracy, robustness, and alignment with evolving public health priorities.• Engage with local and national public health teams, providing technical support and consultation on data science applications in disease modelling and outbreak response.• Conduct on-site visits when required to support data collection and ensure ground-level data integrity and consistency with predictive models. |
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