Duke University School of Nursing Job Description
HR Title: Bioinformatician I
Working Title: Bioinformatician
Job Code: 2895
Job Level: 74

Revised November 18, 2022

Occupational Summary
Coordinate and monitor the design, development, modification and implementation of School of Nursing information technology applications and databases; provide technical support and leadership for the database environment; provide and design tools to assist in the management of the database and client/server environment; provide training to technical support and applications staff in the effective utilization of database; provide data warehousing. Serve as a member of the School of Nursing's Institutional Research (IR) Office that supports executive management decision making, grant proposal submission, routine reporting, and school-level presentation preparation. Manage the school's institutional data and databases, ensure Duke and DUSON policy-compliant security of school databases, proper data redundancy and loss recovery procedures, and serve as a leader for DUSON's data management best practices and credibility of IR information. Provide data management consultation to faculty as part of proposal submission and post award initiation.

Supervisor
Director of Institutional Research with additional accountability to the Assistant Dean for Information Technology for research proposal, data prospector role, and project consultation.

Work Performed
1. Coordinate and monitor the design, development, modification and implementation of School of Nursing information technology applications and databases; provide technical support and leadership for the database environment; provide and design tools to assist in the management of the database and client/server environment; provide training to technical support and applications staff in the effective utilization of database; provide data warehousing.
2. Maintain the centralized school-level databases (e.g.: BiSON) and reporting systems (Reports Central). Ensure complete and accurate transfer of data from enterprise and local databases within established timelines. Problem-solve and correct data connection and transfer problems that may prevent the transfer of data into BiSON. Establish and maintain an index to all administrative data and provide information to users regarding location and accessibility of data; monitor requests for and creation of administrative data. Monitor database performance and serve as quality control agent for database use. Ensure backup and recovery procedures for IR databases.
3. Develop methodology for the ongoing assessment of database performance; identify and resolve conflicts arising over the creation, control and use of data; develop and enforce database use guidelines.
4. Monitor database performance and serve as quality control agent for database use.
5. Provide backup and recovery services.
6. Research, gather, analyze, and summarize information for complex data projects. This includes collection and analysis of large amounts of institutional and school data, comparative data resources, and other public resources. Assignments may require analysis of multiple factors or data sources, internal and external to the university. Follow the school's data release policy consistently, ensuring appropriate approvals prior to releasing information as defined in the policy.
7. Serve as the school's expert in data management best practices and related DUSON and Duke

policies. Utilize data management best practices and ensure the highest level of rigor in the use of data in a consistent manner to produce information that is consistently credible and accurate.

8. Provide consultation and training sessions to database users. Participate in development of long range planning for new projects, serve in an advisory capacity on database procedures and methods. Provide data management consultation to faculty as part of proposal submission and post award initiation. Shepherd PIs of newly awarded projects through the processes required to ensure compliance with Duke data security and redundancy policies, securing storage, understanding storage and other data-related cost, and determining if dedicated data management staff is needed to support the project. Coordinate closely with the Assistant Dean for Information Technology related to this responsibility.

9. Support service oriented DUSON IR processes that provide information to faculty and staff as needed in support of their decision-making and reporting needs. Help educate the school about this service and its value to encourage use.

10. Work with DUSON's Director of Institutional Research, administrative offices, and academic units for strategic reporting in the form of analysis, data exploration, and interpretation.

11. Support development, testing, publishing, and maintaining the centralized school-level reports in Tableau as the primary Institutional Research reporting environment. Use university enterprise databases, static school databases, and others to create and distribute defined routine reports to management and specialized reports, when requested. Serve as the DUSON data prospector for Duke EHR data access.

12. Perform other related duties incidental to the work described herein.

Requirements

Education/Training
Work requires a B.S. in Bioinformatics or the Biological Sciences with demonstrable computational skills; or a B.S. in Computer Science with a strong interest in Biology/Genomics. M.S. preferred.

Experience
OR AN EQUIVALENT COMBINATION OF RELEVANT EDUCATION AND/OR EXPERIENCE

Preferred Skills: Experience using business intelligence software such as Tableau or Power BI, demonstrated experience working on complex projects that require a high level of collaboration in a matrix organization to be successful preferred. Proficiency using SAS, SPSS, MS Office suite, and Structured Query Language (SQL) preferred. Experience using database management and data manipulation tools such as Oracle Sequel Developer and Navicat preferred. Progressive programming or database administration experience to include design, implementation, tuning, backup, recovery, modification and reorganization of mainframe administrative relational databases for a large/complex computer network preferred.