Biomedical Informatics (BIU) Fee for Service

The Biomedical Informatics Unit (BIU) of the Morehouse School of Medicine (MSM) focuses on integration of MSM and affiliated health information systems -- electronic medical and personal health records, patient databases, and other research databases (basic, translational, clinical and population-based) -- into an interoperable repository.

Service	Fee
Initial Consultation	$0
User Account Access/Account Reactivated	$0
Technical Consultation	$150/hour
Training Overview and Intro	1st 30 minutes Free
Project Build	$150/hour
Project Startup – Basic	$150/hour
Project Startup – Advanced	$150/hour
Training By Module	$85/hour/
Full Training	$150/hour
Database Design	$150/hour
Data Collection – Entering Data	$150/hour
Data Cleaning and Management	$150/hour
Trouble Shooting	$150/hour
Data Storage	$35/monthly
Data Extractions	$150/hour
Deep6 Data Acquisition	$150/hour
Maintenance Fee	$35/monthly
Customization and Expert Support	$200/hour
Custom module/plugin/API Design build & Deploy	$2,500/Starting Fee
Custom module/plugin/API support & Maintenance	$75/monthly
AI/ML Consultation	1st Hour Free/$200/hour
Data Engineering	$175/hour
Model Development	$250/ hour or project based
Deployment & Maintenance	$250/hour/Starting Fee $3,000 project/$100-$150 month(maintenance)
Natural Language Processing (NLP)	$250/Hour

Description of Services

Initial Consultation ($0): Includes initial consultation and protocol review - 1 hour free

User Account Access/Account Reactivated (0): Access given or reactivated. New Account access given upon overview and intro to application.

Technical Consultation ($150/hour): Discuss database design requirements. Work with IT to create database server and provide access to the server. Review the database created for user and consult on tables created.

Training Overview and Intro ($0): An introduction and Overview of application.

Project Build and Configuration ($150/Hour): Build of Application and Configuration. This includes customized features, complex branching logic, calculations, or integrations, customized reports, project specific plug-ins, hooks. Cost may vary depending on the complexity of the project.

Project Startup – Basic ($150/hour): Up to 20 hours: Retrieving data, cut or copy again.

Project Startup – Advanced ($150/hour): Up to 40 hours: Support analyst/consultant builds and tests your study forms/instruments, survey set up, automated invitation logic, data piping, branching logic or calculated fields.

Training by Module ($85/hour): (REDCap)

Training ($150/hour): Full training on REDCap Modules; Survey Design; Data Entry; Data Collection Tools; Data Exports/Imports; Reports/Stats; File Repository; User Rights; Data Access Groups (DAGs); API; API Playground; Logging; Codebook; Data Dictionary; Data Quality (Specific to needs); Other Applications (Clinical Conductor, i2b2)

Database Design ($150/hour): Determine the purpose of the database, gather information that might be needed to create the database. Setup table relations specify primary keys. Decide what information should be stored in columns/table, apply rules, analyze the design for errors, create tables and add records to sample data. Make adjustments.

Data Collection – Entering Data ($150/hour): Data provide electronically or on paper to be entered using the data entry guidelines from the requestor for assistance to enter data in their projects (surveys, documents, databases or existing data. Ensure data is collected accurately and ethically.

Data Cleaning and Management ($150/hour): Prepare data for analysis by addressing issues, inconsistencies, errors, fixing and removing incorrect, corrupted, incorrectly formatted, duplicate or incomplete data within a dataset and missing values. Understanding the nature of the data and identifying potential problems. Examine the data to understand its structure, content and quality. Address missing values, deleting rows, imputing values, or using other imputation methods, correct inconsistencies, remove duplicates, fix structural errors, standardize data, identify and remove outliers. Validate data accuracy, cross-check data, document the leaning process, communicate the findings. Store data securely and monitor errors to ensure processes are effective.

Trouble Shooting ($150/hour): Gathers information about the problem (including error messages, affected components, and the context of the issues). Collect relevant data and contest about the problem (review logs, error messages, system configurations, and other relevant information). Establish a theory or probable cause, formulate a hypothesis and the root cause of the problem. Test the theory by implementing tests or experiments to valuate or refute the proposed cause. Develop a step-by-step plan to address the identified cause and resolve the problem. Carry out a plan and implement the necessary changes or corrections. Record the problem, the investigation process, the solution, and any lessons learned.

Deep6 Data Acquisition (150/hour): Extract from Deep6 and then Imported into Engage.

Data Storage ($35/hour): Save data on secure server. Data is backup and stored. MSM IT Network based storage is used.

Data Extractions ($150/hour): Web scraping automatically extract data from website. API Integration accessing data through application programming interfaces. Database queries using SQL or other query languages to retrieve data

from databases. File extraction, extracting data from various file formats like CSV, JSON, XML. Consolidate data from multiple sources to gather information from various systems into a centralized location. Prepare data for analysis to transform and clean data for meaningful insights. Use extracted data to support business strategies and decisions.

Maintenance Fee ($35/monthly): Ongoing process of ensuring data remains accurate, complete, and relevant. Regularly updating, validating, and correcting data. Manage data storage and ensuring compliance with data governance standards. Making necessary changes to data as it evolves, establishing procedures for storing and managing historical data to ensure it remains accessible for reporting, auditing, and other purposes. Implementing measures to protect data from unauthorized access, modification, or loss

Customization and Expert Support ($200/hour): Customization-Modifying the structure of the data to better align with specific analytical or reporting needs, data cleaning and transformation, applying specific rules and processes to ensure data accuracy and consistency, adding relevant data from external sources to enhance data insights, implementing policies and procedures to ensure data quality and security.

Expert Support – Troubleshooting and problem solving by identifying and resolving issues related to data integrity, access or performance, technical assistance by providing guidance on data migration, integration, and other technical aspects, training and consulting by educating users on best practices for data management and providing guidance on implementing new data processes. Assessing data quality and security to ensure adherence to standards,

Customization will allow adaptation to your data processes unique to your needs, export support ensures that these processes are implemented and maintained.

Custom module/plugin/API design/ build & deploy ($2,500 Starting Fee/Per Project): Specify what functionalities your module/plugin/API will expose, including inputs, outputs and expected behaviors. Use TypeScript if applicable. Choose a programing language for the project and the platform (e.g., GO, JavaScript, Python). Write Code implement the functionality defined in the API Contract, test the module/plugin/API thoroughly to ensure it works as expected. Deployment (Packaging, Deployment Method, Integration).

Custom module/plugin/API support & maintenance ($75/month):

A set of defined rules and specifications that software applications use to communicate with each other. An intermediary, allowing different programs to interact and exchange data without needing to understand the internal workings of each other.

APIs enable applications to exchange data as part of a request and response process. They typically come in the form of a library that a software developer can include in their application's code.

AI/ML Consultation (1st Hour Free/$200/hour): Scoping session to evaluate data readiness and identify potential AI/ML use cases such as prediction, classification, or NLP applications.

Data Engineering Consultation (1st Hour Free/$200/hour): Scoping session to evaluate data readiness and identify potential AI/ML use cases such as prediction, classification, or NLP applications.