# DMS
a brmi company

APPLIED INFO SCIENCES SERVICES
Insightful solutions for your complex data.

DMS scientific professionals deliver statistical and mathematical modeling and analysis. We develop scientific programs for operational research, including biomedical and public health disciplines.

Our thought leaders work closely with the research communities to identify solutions to complex health topics and prepare publications for use in scientific journals. Our advisory services include the following:
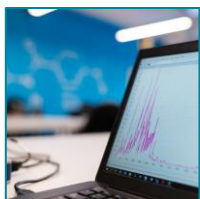
Advanced Statistical and Mathematical Models

- Transforming "big data" into actionable information
- Monte Carlo and simulation studies
- Generalized linear modeling
- Univariate and multivariate analyses
- Predictive analytics
- Survival and proportional hazards analyses

Experimental Design and Implementation

- Identifying areas of interest or potentially impactful information
- Scientific experiment design
- Statistically significant and repeatable results

Scientific Programming/ Bioinformatics

- Specialized programming
- R, SPSS, SAS, MathWorks® MATLAB®, PHP, Python, and more
- Research usability
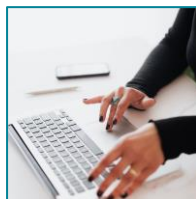
Preparation for Publication

- Supporting publication of analyses and discoveries
- Authoring materials to meet peer-reviewed standards
- Informing wider scientific audiences

CMMIDEV/3℠
CMMISVC/3℠

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CERTIFIED ISO 9001:2015
CERTIFIED ISO 20000-1:2018
CERTIFIED ISO 27001:2013

We deliver systemic solutions for your complex data that help you to bring reproducible findings and well-supported information to your scientific audience. Our solutions also reduce resource requirements and human intervention, freeing scientists and scientific professionals to redirect their focus to higher-value tasks and higher-priority areas.

ADVANCING SCIENTIFIC RESEARCH

Harnessing the Power of Data. Leveraging Analytics.

DMS is a leader in combining analytics and automation to empower its clients and has contributed to 300+ scientific publications. A few of our successes ...

Statistical Methods
National Cancer Institute

We developed a modified approach to conducting experiments and filtering results which produces a ~ 2,000 % increase in reproducible findings while maintaining statistical power. Our Progressive Filtering Model more accurately identifies desirable and undesirable compounds in experiments and reduces the need to increase sample sizes. This model uses fewer resources to reproduce consistent results for peer review, freeing staff to focus on other experiments.

Automated Image Tracking
National Cancer Institute

We developed an automated process for scanning cell images and identifying where changes in the cells had occurred. The automated process uses BASH, Image Magick, Jython, and R Shiny to preprocess, detect and track cells; filter out problematic cell tracks; and present analysis results. Our solution does not require human intervention and completes scans and analyses in approximately 3 minutes, a 98% improvement in efficiency. The solution frees researchers to perform more value-added tasks and minimizes backlog.

Pattern Classification
National Cancer Institute

We originated and are implementing in ongoing fashion supervised learning such as multi-class logistic regression with dimension reduction and custom machine learning approaches for a long-term project with the Rare Tumor Initiative. This project seeks to categorize the relationships between rare tumors and more commonly found/studied varieties while categorizing key differences to best advise decision-making on potential treatments and prognosis for these rare diseases.

Prime Contract Vehicles
GSA Multiple Award Schedule (MAS), *GS-35F-0490W*
FDIC IT Strategy and Business Solutions Support (SBSS) Basic Ordering Agreement

Other Contract Vehicles
FBI Information Technology Supplies and Support Services (ITSSS) IDIQ
DHS Services for Enabling Agile Delivery (SEAD) Blanket Purchase Agreement
DHS Architecture, Development, and Platform Technical Services (ADaPTS) BPA
GSA 8(a) STARS III