

Working Title:	Data Engineer
Job Code - Market Title:	104072 - Data Engineer Intermediate
UMSI Unit:	415000 - UMSI IT
Career Families and Bands	Information Technology - Application Development
FLSA Status:	Exempt
Salary Range:	\$100k-110k
Effort:	100%, 2-year term limited
Work Mode:	Hybrid
Supervisor:	Technical Lead
Last Updated:	10/16/2026 PG

How to Apply:

A cover letter is required for consideration for this position and should be attached as the first page of your resume. The cover letter should address your specific interest in the position and highlight your experiences that directly relate to this position for a total of 3 pages.

With questions about the position or office, please email mabouzah@umich.edu. For requests for accommodations or support with the application process, please email UMSI Human Resources at umsi.human.resources@umich.edu.

Who We Are:

The [School of Information](#) is a progressive, interdisciplinary professional school that offers five academic programs. UMSI delivers innovative, elegant, and ethical solutions connecting people, information, and technology. The school was one of the first iSchools in the nation and is the premier institution studying and using technology to improve human computer interactions. Our school mission is to create and share knowledge so that people will use information – with technology – to build a better world.

Job Summary:

MICOM (Michigan Integrated Modeling and Outbreak Management) is seeking a Data Engineer to support collaborative initiatives between the University of Michigan, the Michigan Department of Health and Human Services (MDHHS), and the Michigan Department of Technology, Management, and Budget (DTMB).

The Data Engineer will design, build, and maintain scalable, secure, and high-performance data platforms that enable public health analytics, epidemiological modeling, and operational decision-making. This role focuses on modern data engineering practices, cloud-native architectures, and open-source technologies to deliver reliable, compliant, and efficient data pipelines.

The successful candidate will collaborate closely with software engineers, data scientists, epidemiologists, and public health stakeholders to build robust data infrastructure supporting critical statewide public health initiatives.

This is a two-year term limited position, assuming satisfactory performance and conduct, the availability of work, and continued funding.

Responsibilities:**50% Data Engineering & Pipeline Development**

- Design, develop, and maintain scalable data pipelines for batch and near real-time data processing.
- Design, implement, and maintain ETL/ELT pipelines to ingest, transform, and curate data from multiple internal and external data sources.
- Build and optimize modern Lakehouse architectures to support reliable, governed, and analytics-ready datasets.
- Develop distributed data processing workflows and high-performance analytical workloads.
- Build efficient in-memory data processing solutions for interactive analytics and data validation.
- Optimize data pipelines and storage strategies for scalability, performance, and cost efficiency.

25% Cloud Platform, Infrastructure & Operations

- Develop and operate cloud-native data platforms (e.g., AWS)
- Build, deploy, and maintain Docker-based data processing applications
- Implement automated data quality checks, validation frameworks, and monitoring to ensure data reliability and integrity.
- Implement secure data engineering practices that comply with institutional, state, and federal data governance and privacy requirements.
- Monitor production data workflows, troubleshoot operational issues, and continuously improve platform reliability and observability.

25% Collaboration, Documentation & Continuous Improvement

- Collaborate with software engineers, data scientists, epidemiologists, and public health partners to deliver trusted, high-quality datasets and data products.
- Participate in code reviews, architectural discussions, and the adoption of engineering best practices across the team.
- Develop reusable data engineering frameworks, libraries, and infrastructure to improve developer productivity and platform consistency.
- Create and maintain technical documentation, including data models, pipeline designs, operational runbooks, and deployment procedures.
- Stay current with emerging open-source data technologies and recommend improvements that enhance the team's data engineering capabilities.

Required Qualifications/Credentials/Experience:

- Bachelor's degree in Computer Science, Information Systems, Engineering, or related technical field, or equivalent experience.
- 4+ years of professional experience in Data Engineering or related software engineering roles.
- Strong programming skills (Python)
- Experience building scalable ETL/ELT pipelines and distributed data processing systems.
- Experience designing and implementing modern Lakehouse architectures
- Hands-on experience with Apache Spark and Polars for large-scale and high-performance data processing or similar applications
- Experience working with cloud computing services (e.g. AWS, GCP, Azure)
- Experience developing and operating Docker-based workloads
- Experience with SQL and analytical query engines.
- Experience with Parquet and modern columnar data formats.
- Experience with Git-based development workflows and CI/CD pipelines.
- Strong understanding of data quality, observability, testing, and monitoring.
- Strong debugging, performance tuning, and optimization skills.

Supervisory Responsibilities:

Potentially student interns.

Modes of Work:

Positions that are eligible for hybrid or mobile/remote work mode are at the discretion of the hiring department. Work agreements are reviewed annually at a minimum and are subject to change at any time, and for any reason, throughout the course of employment. Learn more about the work modes.

This is a hybrid position. You will coordinate your schedule with your supervisor in accordance with school policy. You may be required to travel to multiple locations on and off campus. The main office workspace for this position is located in the Leinweber Computer Science and Information Building. Punctual and regular attendance is required. You will be required to work during non-business hours and on weekends based on the requirements for your position.

Application Deadline:

Job openings are posted for a minimum of seven calendar days. The review and selection process may begin as early as the eighth day after posting. This opening may be removed from posting boards and filled anytime after the minimum posting period has ended.

Additional Information:

Visa sponsorship is not available for this position.

This is a two-year term limited position, assuming satisfactory performance and conduct, the availability of work, and continued funding.

This position may work with and/or support systems that maintain or process sensitive institutional data as defined by university policy. Successful candidates must comply with federal, state, and local law, and/or university policies or agreements that require the university to implement specific privacy and security safeguards, including but not limited to ITAR, EAR, HIPAA, FERPA, and FISMA. This position is responsible for protecting data and information from unauthorized release or from loss, alteration, or unauthorized deletion; and following applicable regulations and instructions regarding access to computerized files and release of data internally or externally to the University of Michigan.

Salary Information

The salary range for this position is \$100,000 to \$110,000. Salary is determined by direct relevant experience and demonstrated past performance results while ensuring equity on our team. While rare, we may offer a salary above the posted range for an exceptionally qualified candidate, considering internal equity and budget. All candidates are encouraged to discuss salary questions to honor alignment and transparency throughout the recruiting process.

Why work at Michigan?

In addition to a career filled with purpose and opportunity, the University of Michigan offers a comprehensive benefits package to help you stay well, protect yourself and your family and plan for a secure future. Benefits include:

- Generous time off (Vacation, Holidays, Season Days, Family Leave)
- A retirement plan that provides two-for-one matching contributions after 12 months of eligible service, with immediate vesting
- Many choices for comprehensive health insurance
- Dental and vision insurance
- Life insurance
- Long-term disability coverage
- Flexible spending accounts for healthcare and dependent care expenses

Background Screening

The University of Michigan conducts background checks on all job candidates upon acceptance of a contingent offer and may use a third-party administrator to conduct background checks. Background checks will be performed in compliance with the Fair Credit Reporting Act.

EEO

The University of Michigan is an equal-opportunity employer.