

XTIVIA MLOPS SERVICE OFFERINGS

OVERVIEW

Managing the lifecycle of machine learning models involves data preparation, data analysis, model building, training, testing, and operationalizing (deployment, monitoring, and continuous improvement). Applying the DevOps philosophy to machine learning operations improves the efficiency of model operations, model reliability, and model reproducibility. This requires a disciplined approach, a process mindset, lean automation, and tool experience.

Assessment & Roadmapping

- Review Current ML Lifecycle Management
- Understand Future-State
- Confirm Gaps
- Provide Recommendations
- Provide Implementation Roadmap

Implementation

- Establish MLOps Processes
- Automate and Test MLOps Pipeline
- Deploy MLOps Pipeline
- Post-production Support

Support

- Monitor Model Performance
- Tune Model Performance
- Change Management

XTIVIA uses architecture, process, and tool experience to provide expertise across three categories: Assessment & Roadmapping, Implementation, and Support. We analyze current people (roles and responsibilities), processes (including experimentation, model training, validation, integration, testing, governance, and monitoring), and tools (including source control, CI/CD, containers, model registry, code coverage, monitoring tools, and metadata store).

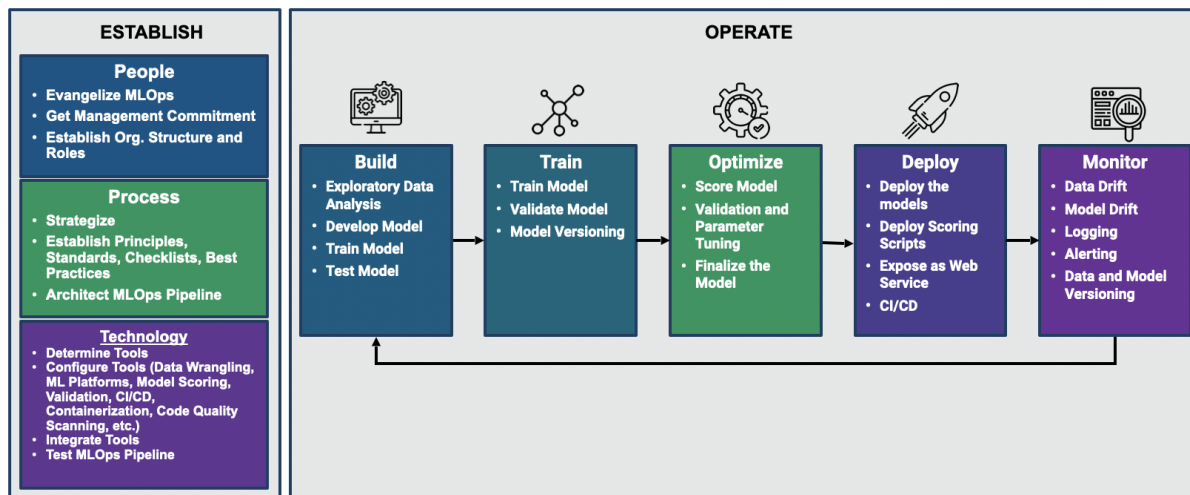
We utilize automated processes to identify and resolve the training-serving skew. We automate the Operations part of the Machine Learning lifecycle and look for opportunities for automation in Feature Engineering, Feature Selection, and Algorithm Selection.

MLOPS MATURITY

We use Microsoft’s MLOps maturity model to provide an unbiased maturity assessment and a roadmap to achieve a target maturity level. We perform a deep dive analysis on current people (roles and responsibilities), processes (including governance, experimentation, model training, validation, integration, testing, and monitoring), and technology (including source control, CI/CD, containers, model registry, code coverage, monitoring tools, and metadata store).

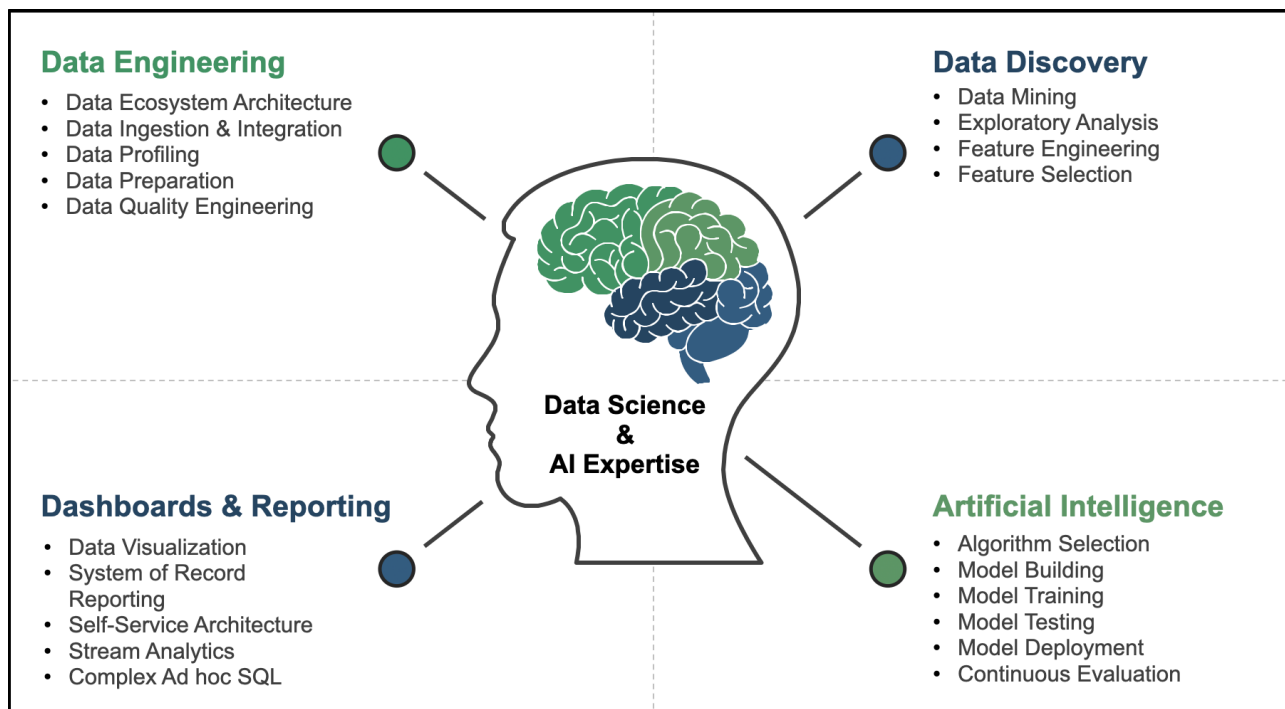
DELIVERING ON MLOPS

Our consultants have experience in DevOps, containers, and various MLOps tools, including cloud-native services to build an automated and reliable machine learning workflow. XTIVIA uses the following methodology for establishing and operating the MLOps pipeline delivering scalable and robust Machine Learning models.



We architect and deliver the MLOps pipeline following best practices in feature engineering, model selection & validation, and post-deployment monitoring. Our MLOps architects account for changing data patterns, model consumption patterns, real-time vs. batch serving requirements, governance, performance, scalability, reliability, availability when designing a product-grade machine learning pipeline.

DATA SCIENCE & AI EXPERTISE



At XTIVIA, we pride ourselves on our expertise in delivering machine learning and deep learning models using a variety of frameworks such as TensorFlow, Keras, Scikit-Learn, PyTorch, Azure Machine Learning, AWS Machine Learning, Google Cloud ML Engine, and more. Our consultants have expertise in integrating machine learning into existing business applications and reporting systems.

Let XTIVIA help you deliver an agile machine learning pipeline to empower your data consumers with reliable AI and analytics applications.

ABOUT XTIVIA

XTIVIA is a proven technology integration and innovation company known for delivering leading-edge technology solutions to our clients' specific requirements, regardless of project complexity. We bring next-level business operations to reality through Application Development, Business Intelligence, Data Warehousing, Database Support & Management, Enterprise Information Management, Digital Experience Solutions and Enterprise Resource Planning. Our success stems from a demonstrated ability to deliver deep expertise via professional services, empowering clients to leverage their chosen technology successfully, competitively, and profitably. XTIVIA has offices in Colorado, New York, New Jersey, Missouri, Texas, Virginia, and India.