
BiModal
GROUP

MEET THE TEAM

Darren Nguyen
CEO

Martin Hamza
Team Lead

Alex Romanov
Team Lead

Eugen Olteanu
Team Lead

Henry Singh
Team Lead

Dima Platitsyn
Program Manager

Mark Shaban
Project Coordinator

Rita Zannu
Project Coordinator

BiModal GROUP

WHO ARE WE?

BiModal Group, LLC is a trusted IT consulting firm delivering solutions across DevOps, DevSecOps, Software Development, AI, Quality Assurance, Platform Engineering, and Security.

Core Expertise

- **DevOps Focus**: 85% of our engagements are DevOps-driven.
- **Kubernetes & Terraform**: Nearly all projects leverage Kubernetes and Terraform, with a strong emphasis on scalability and security best practices.
- **Compliance:** We deliver robust compliance support for regulated environments.

Our Approach

We champion Infrastructure as Code (IaC) principles, ensuring that:

- **Infrastructure changes are codified, peer-reviewed, and thoroughly tested.**
- **Continuous Delivery (CD) pipelines are used to automate deployment.**
- **Monitoring frameworks validate changes and enforce operational excellence.**

Innovation

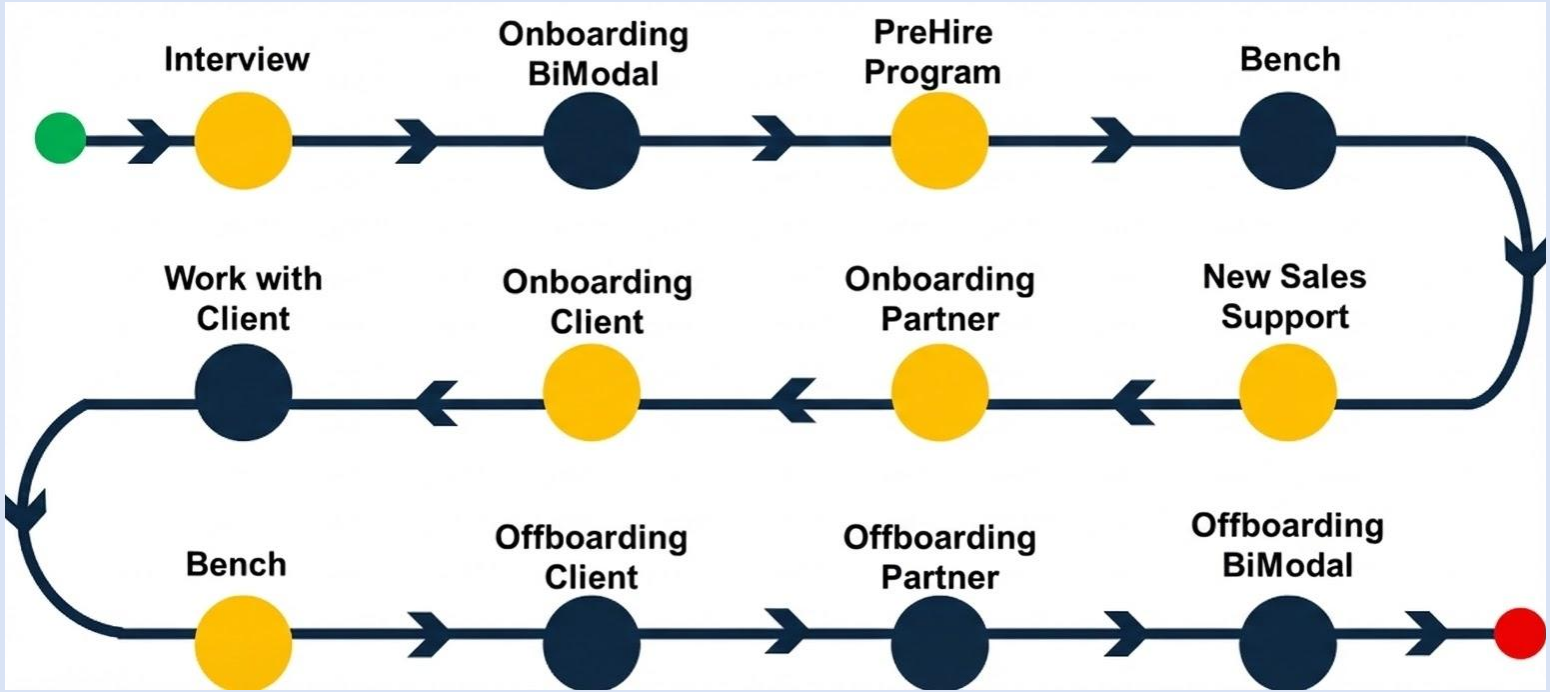
We are actively exploring the integration of Artificial Intelligence (AI) across our service lines to enhance automation, efficiency, and intelligent decision-making.

SERVICES PROVIDED

- DevOps
- DevSecOps
- Platform Engineering
- Software Development
- Data Engineering
- Quality Assurance
- Compliance
- AI & ML

BiModal GROUP

HOW WE OPERATE



WHAT SETS US APART

90%+
Success Rate

Proven delivery, trusted by clients.

Goal-Aligned Team

Engineers embedded in your vision from day one.

Impact-Driven

Solutions built for long-term value, not just quick wins.

Village Structure

We believe in adding more resources than necessary because we believe most projects requires more than one engineer.

Technical Team

Our team consists of technical professionals across all functions, including project management and recruiting.

Services In Depth

- DevOps
- DevSecOps
- Platform Engineering
- Software Development
- Data Engineering
- Quality Assurance
- Compliance
- AI & ML

BiModal GROUP

DevOps Capabilities

1. Continuous Delivery & Automation

- **CI/CD Pipeline Expertise:** Designing, implementing, and optimizing continuous integration and delivery pipelines using tools like **GitLab**, **GitHub Actions**, and exploring modern approaches like **Dagger**.
- **Pipeline Migration:** Seamlessly executing migrations between CI/CD platforms to standardize workflows (e.g., GitLab to GitHub Actions).
- **Quality Gates:** Integrating automated testing and compliance checks as mandatory steps in the delivery pipeline.

2. Infrastructure as Code (IaC) & GitOps

- **Standardized IaC:** Provisioning and managing repeatable infrastructure using **Terraform** and configuration tools like **Ansible**.
- **GitOps Implementation:** Establishing a pull-based continuous deployment model using **ArgoCD** where Git is the single source of truth.
- **Disaster Recovery (DR):** Implementing robust DR solutions for AWS and Kubernetes using tools like **AWS Backup** and **Velero**.

DevOps Capabilities

3. Orchestration & Cloud Platforms

- **Kubernetes Management:** Full lifecycle management and optimization of container orchestration platforms (e.g., **EKS** and add-ons).
- **Advanced Scaling:** Implementing intelligent autoscaling and resource management using **Karpenter** and Cluster Autoscaler.
- **Enterprise Platforms:** Expertise in managing complex enterprise container platforms such as **OpenShift**.

4. Observability & FinOps

- **Full-Stack Monitoring:** Implementing comprehensive monitoring and logging stacks (**Datadog**, **Prometheus, Grafana, OpenTelemtry**).
- **Cost Optimization:** Driving **FinOps** initiatives, configuring cost dashboards (e.g., **Cloudability**), and executing cost reduction through resource cleanup.

5. Governance & Cloud Architecture

- **Well-Architected Design:** Adhering to best practices in **Operational Excellence**, **Reliability**, **Performance Efficiency**, and **Cost Optimization** from the **AWS Well-Architected Framework**.
- **Policy & Compliance:** Enforcing **Policy as Code (PaC)** to ensure infrastructure governance across all environments.

BiModal GROUP

DevOps Success Stories

1. OpenStack to AWS Migration

Orchestrated an end-to-end migration from OpenStack to AWS for 20 internal teams, aligning infrastructure modernization with application and business requirements. By leading stakeholder workshops and defining tailored migration strategies, the initiative replaced legacy OpenStack environments with scalable, cloud-native AWS architectures. Infrastructure was provisioned through custom Terraform and Terragrunt modules, establishing a standardized, code-driven foundation. Post-migration, CI/CD automation and AWS service integrations via GitLab CI were implemented, improving operational efficiency, reducing manual intervention, and enabling teams to adopt a more reliable and automated cloud operating model.

2. VM and Linux Support with Ansible

Orchestrated the end-to-end provisioning and lifecycle management of 250+ on-premises Linux VMs using bespoke automation. By integrating **RedHat Ansible Automation Platform (AAP)** and **RedHat Satellite**, we replaced manual workflows with a unified, code-driven management system. This initiative standardized configurations at scale and established a "cloud-like" operational model, significantly accelerating delivery while ensuring consistent security compliance across the enterprise fleet.

3. LGTM Observability

<details about Ben's project here>

BiModal GROUP

DevOps Success Stories

4. HPC Infrastructure Support

Engineered scalable, Slurm-based HPC clusters and RStudio environments tailored for advanced ML and data analytics workloads, fully automated via Terraform and CI/CD. By executing a strategic migration from FSxL to WEKA and implementing capacity reservations, we significantly optimized cloud spend while enhancing storage performance. The integration of Datadog for deep observability established a high-reliability environment, directly increasing user productivity and accelerating research-to-delivery timelines.

5. Gitlab to Github Migration

Developed a standardized, end-to-end framework to orchestrate the seamless migration of hundreds of repositories from GitLab to GitHub. By engineering custom automation for repository inventory and CI/CD pipeline conversion, we significantly reduced manual effort and technical risk. The initiative is underpinned by a robust engagement model, incorporating readiness checks and proactive communication, ensuring minimal disruption and a consistent, high-quality transition for all development teams.

BiModal GROUP

DevOps Success Stories

6. EKS Platform for AI/ML Workloads

Designed and delivered a production-grade Amazon EKS platform optimized for AI/ML workloads, providing a standardized, scalable foundation for model training, inference, and data-intensive applications. Led the end-to-end platform architecture and automation, aligning infrastructure design with ML engineering and business requirements. The platform was provisioned using custom Terraform and Terragrunt modules and implemented following a GitOps bridge pattern, ensuring declarative, auditable, and repeatable cluster and application management.

Implemented full CI/CD automation to manage EKS lifecycle operations, including cluster upgrades and controlled rollout of critical add-ons such as NGINX Ingress, CSI drivers, and Argo CD, significantly reducing operational risk and manual intervention. Integrated HashiCorp Vault for secure, dynamic secret management within the cluster, enabling fine-grained access control and secret rotation for AI/ML workloads.

Unified platform access by integrating the internal authentication system across AWS, EKS, Argo CD, and Vault, delivering a consistent and secure identity model. Developed a custom CLI to streamline authentication and access to AWS and platform components, improving developer productivity and reducing onboarding friction. The resulting platform enabled teams to adopt a secure, automated, and cloud-native operating model tailored for high-performance AI/ML workloads.

7. Azure Well-Architected Framework

Led a comprehensive strategic overhaul of a global engineering firm’s Azure infrastructure to resolve critical performance and scalability bottlenecks. By replacing a legacy manual architecture with **Infrastructure as Code (IaC)**, we automated network management and deployed an enhanced security framework aligned with the **Azure Well-Architected Framework**. This transformation eliminated operational bottlenecks and modernized the environment into a highly scalable, secure, and developer-centric platform, driving significant gains in deployment speed and system reliability.

BiModal GROUP

Services In Depth

- DevOps
- DevSecOps
- Platform Engineering
- Software Development
- Data Engineering
- Quality Assurance
- Compliance
- AI & ML

BiModal GROUP

Platform Engineering Capabilities

1. Internal Developer Platform (IDP) Architecture

- **Unified Developer Portal:** Leveraging **Backstage** to provide a "single pane of glass" for service discovery, software catalogs, and technical documentation.
- **Universal Control Plane:** Implementing **Crossplane** to enable declarative, Kubernetes-native infrastructure management across hybrid and multi-cloud environments.
- **Advanced Service Orchestration:** Using **Kratix** to manage complex multi-tenant promises and **AWS ACK / Kro** for native cloud resource provisioning directly through Kubernetes APIs.

2. Enriching Developer Experience (DevEx)

- **Cognitive Load Reduction:** Abstracting underlying infrastructure complexity, moving beyond manual ticketing to automated, "product-like" developer interactions.
- **Self-Service Scaffolding:** Empowering teams to bootstrap production-ready services instantly through pre-configured **Backstage Software Templates**.
- **Ephemeral Environment Management:** Automating the creation and lifecycle of on-demand testing environments to shorten feedback loops.
- **Paved "Golden Paths":** Providing a library of reusable building blocks with opinionated defaults, security policies and operational best practices.

BiModal GROUP

Platform Engineering Success Stories

1. IDP Assessment

Led a comprehensive assessment for an Internal Developer Platform (IDP) initiative, aligning platform capabilities with the client's engineering and operational requirements. By collecting detailed stakeholder requirements, evaluating leading IDP platforms including **Kratix**, **env0**, and **Humanitec** and engaging directly with vendors, the project established a structured comparison and demo framework for informed decision making. An evaluation criteria workbook with clear scoring and recommendations was produced to guide the client's selection process. The client independently validated the findings and proceeded with the recommended platform for a proof of value (PoV), confirming strong alignment between the assessment outcomes and business objectives.

2. Kratix Deployment

We architected and deployed a comprehensive Internal Developer Platform (IDP) utilizing **Kratix** and **Backstage** for a large-scale organization of over 100 developers. By engineering **"Golden Paths"** that automated the provisioning of secure, hardened infrastructure building blocks, we effectively eliminated the manual approval bottlenecks and security hurdles that previously hindered production. This initiative transformed high-friction workflows into a seamless self-service experience, resulting in an exponential reduction in software delivery time while maintaining rigorous enterprise compliance standards.

BiModal GROUP

Platform Engineering Success Stories

3. IDP MVP

BiModal GROUP

Services In Depth

- DevOps
- DevSecOps
- Platform Engineering
- Software Development
- Data Engineering
- Quality Assurance
- Compliance
- AI & ML

BiModal GROUP

AI & ML Capabilities

1. Secure & Scalable AI Model Deployment

- **Private-by-Default AI Infrastructure:** Designing AI platforms that support on-premise, VPC-isolated, and air-gapped deployments, enabling enterprises to adopt AI while maintaining strict data sovereignty, regulatory compliance, and IP protection.
- **Enterprise-Grade Controls:** Built-in governance including: Access control and model-level authorization, Audit logs for inference and training usage and Data isolation per tenant, team, or business unit
- **Model Abstraction Layer:** Providing a unified interface for deploying and operating models regardless of origin—open-source, fine-tuned internal models, or proprietary third-party models—decoupling application teams from underlying model complexity.

2. Data Collation, Embeddings & Knowledge Infrastructure

- **Enterprise Data Ingestion & Normalization:** Centralized pipelines to ingest structured and unstructured data from internal sources (documents, wikis, tickets, databases, logs), normalizing them into AI-ready formats.
- **Data Lineage & Explainability:** Clear traceability from model output back to source documents, embeddings, and transformations—critical for enterprise trust, debugging, and compliance.

3. MLOps & AI Lifecycle Management

- **End-to-End Model Lifecycle:** From experimentation to production, CI/CD for AI Systems and Observability for AI

BiModal GROUP

AI & ML Success Stories

1. Kamiwaza RFP Automation

Our client sought a self-hosted AI solution to automate the process of reviewing hundreds of US federal government SAM Requests for Proposals (RFPs) and identifying those suitable for their services. This system also needed to automatically generate proposals for the identified opportunities. We successfully deployed Kamiwaza as a self-hosted solution and developed a comprehensive RFP application. This application is capable of processing over 1,000 reports from SAM.gov, creating proposals only for the most suitable opportunities.

2. Organization wide AI/ML Enablement

A giant biotech company required AI experts to drive AI innovation and enablement across their vast teams. We helped with the following:

- **Custom Architecture:** Developed a resilient, multi-model chat interface featuring fine-grained access control and privacy-preserving telemetry.
- **MLOps & Standardized Tooling:** Streamlined development by deploying and supporting LangSmith and Dagster+, alongside custom-built authentication systems.
- **Proven Reliability:** Engineered high-uptime systems capable of supporting diverse AI use cases across the entire organization.

BiModal GROUP

AI & ML Success Stories

3. RAG Platform Implementation (Enterprise Knowledge Retrieval at Scale)

Our client sought a secure, scalable way to unlock institutional knowledge across vast internal documentation while maintaining strict compliance, privacy, and data residency requirements. The goal was not “chat with documents,” but a production-grade Retrieval-Augmented Generation (RAG) platform that teams across the organization could safely rely on.

What was delivered:

Enterprise-Grade RAG Architecture
Designed and implemented a modular RAG system capable of ingesting large, heterogeneous document corpora (policies, SOPs, research artifacts, internal knowledge bases) with clear separation between ingestion, embedding, retrieval, and generation layers.

Secure, Private-by-Design Deployment
Deployed the system within Roche’s controlled environments, ensuring sensitive data never left approved boundaries. Access controls, tenant isolation, and strict auditability were built in from day one.

High-Quality Retrieval & Grounded Responses
Implemented domain-aware chunking, embedding strategies, and ranking logic to ensure responses were grounded in authoritative sources, minimizing hallucinations and increasing user trust.

Observability & Traceability
Enabled full traceability from generated answers back to source documents and embeddings, supporting compliance, explainability, and rapid debugging, critical for regulated enterprise use.

BiModal GROUP

QUESTIONS

BiModal GROUP