Matt Oremland, PhD

Associate Director, AI & Innovative Solutions

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PROFESSIONAL SUMMARY

AI and data science leader with PhD in Mathematics and 9+ years driving AI adoption in pharmaceutical and life sciences environments. Proven track record delivering cross-functional AI programs in FDA-regulated settings including Medical Affairs analytics, regulatory intelligence systems, and ML-powered decisioning platforms. Deep expertise in AI governance, compliance frameworks, and stakeholder management across medical, regulatory, legal, IT, and data science teams. Successfully translated medical strategy and business needs into practical AI solutions delivering measurable outcomes through rigorous project management and change enablement.

PROFESSIONAL EXPERIENCE

Redica Systems   April 2025 – Present
Director, Data Strategy & Analytics   *Remote*

- Lead end-to-end AI initiatives for pharmaceutical clients including Eli Lilly and Merck; manage use-case evaluation, project planning, execution, and stakeholder alignment translating regulatory compliance needs into practical AI solutions
- Built production LLM classifier processing FDA enforcement data; established comprehensive AI governance framework ensuring regulatory alignment, developed validation metrics, documented SOPs, and coordinated Legal and Compliance review for deployment approval
- Manage AI Council operations facilitating knowledge sharing across client organizations; maintain inventory of AI tools to avoid duplication, connect with stakeholders to build consensus, and advance AI adoption through training and demonstrations
- Drive measurable impact through KPIs and executive dashboards tracking model performance, user adoption, risk mitigation outcomes, and ROI; provide regular updates to senior leadership and board-level stakeholders
- Partner with cross-functional teams including engineering, product, IT, legal, and regulatory to deliver AI-enabled projects; facilitate assessment of existing tools and propose alternatives aligned with organizational priorities
- Maintain up-to-date knowledge of AI regulatory developments, competitor benchmarking, and technical innovations in pharmaceutical AI applications; communicate implications to relevant stakeholders through presentations at CHPA, ISPE conferences

Tidal Wave Analytics LLC   January 2025 – Present
Consulting Data Scientist / Founder   *Saratoga Springs, NY*

- Deliver cross-functional AI programs for multiple clients; apply disciplined project management including timelines, resourcing, risk mitigation, and budgeting across concurrent engagements in regulated and SaaS environments
- Built agentic AI system using RAG architecture for tax compliance decisioning; managed vendor evaluation, procurement workflows, and external partner coordination ensuring governance and regulatory alignment
- Develop comprehensive documentation including technical requirements, validation frameworks, and training materials; support change management through workshops and demonstrations driving AI understanding and adoption
- Manage stakeholder expectations across technical and business teams; facilitate communication strategies ensuring successful integration of AI capabilities into operational workflows

Gilead Sciences   January 2023 – March 2025
Director, Data & Analytics (Medical Affairs)   *Foster City, CA*

- Led analytics and AI strategy for Global Medical Affairs organization; partnered with medical strategy teams to translate business needs into data-driven solutions advancing scientific engagement and evidence generation
- Managed cross-functional stakeholder relationships across Medical Affairs, IT, Legal, Regulatory, Data Science, and external vendors; facilitated governance reviews ensuring compliance with healthcare privacy standards and organizational requirements
- Built centralized analytics platform consolidating healthcare professional (HCP) and healthcare organization (HCO) reference data; ensured regulatory compliance and data governance frameworks aligned with Medical Affairs quality standards
- Applied rigorous project management delivering multiple concurrent initiatives including data lake development, dashboard deployment, and vendor integrations; managed timelines, budgets, risk mitigation, and executive reporting
- Measured impact through KPIs demonstrating 70% reduction in manual operations and enabling data-informed Medical Affairs strategy; communicated outcomes to VP and SVP-level leadership
- Led team of 5+ professionals including data scientists, analysts, and vendors; developed change management strategies including training programs, communication plans, and adoption tracking ensuring successful digital transformation

Takeda Pharmaceuticals
Associate Director, Digital & Data Science

May 2021 – December 2022
Lexington, MA

- Drove AI and advanced analytics adoption across global pharmaceutical manufacturing organization; translated business needs into ML-powered solutions ensuring compliance with FDA regulatory requirements
- Led cross-functional collaboration across Quality, Manufacturing, IT, Regulatory, and Data Science teams; facilitated stakeholder alignment and consensus-building in matrixed organization advancing digital transformation initiatives
- Managed AI governance ensuring model validation, documentation, and compliance with regulatory standards; developed SOPs for model lifecycle management including development, validation, deployment, and monitoring
- Applied project management expertise coordinating semi-annual APQR processes; managed timelines, cross-functional dependencies, and executive reporting demonstrating measurable improvements in review efficiency
- Served as technical platform administrator establishing governance standards and facilitating knowledge sharing across enterprise analytics environment

Regeneron Pharmaceuticals
Senior Process Data Scientist

May 2016 – May 2021
Rensselaer, NY

- Pioneered AI adoption in biopharmaceutical manufacturing building first automated optimization and forecasting systems; demonstrated measurable business value driving change integration across operations teams
- Partnered with cross-functional stakeholders including Manufacturing, Quality, Engineering, and Regulatory to deliver AI-enabled decisioning platforms; facilitated workshops and training sessions driving AI understanding and adoption
- Developed comprehensive documentation including technical requirements, validation metrics, and model governance frameworks ensuring FDA compliance and audit readiness
- Managed vendor relationships for data acquisition and analytics tools; coordinated procurement workflows and contract management
- Communicated technical AI concepts to senior leadership demonstrating ROI through quantified process improvements and quality outcomes; influenced strategic investment decisions for expanded AI capabilities

Mathematical Biosciences Institute
Postdoctoral Research Fellow

2014 – 2016
Columbus, OH

- Conducted research applying AI algorithms to biological systems in life sciences setting; published 5 peer-reviewed papers and 1 textbook chapter demonstrating technical expertise in computational methods and optimization

EDUCATION

Doctor of Philosophy (PhD) in Mathematics

2014

Virginia Polytechnic Institute & State University

Dissertation: Optimization and control of agent-based models in biological systems. Research focus on artificial intelligence algorithms, optimization theory, and computational decision-making methods.

SKILLS & TECHNOLOGIES

AI Strategy & Program Leadership: AI Implementation • Program Management • Use-Case Evaluation • Stakeholder Alignment • Cross-Functional Leadership • Change Management

Pharmaceutical & Medical Affairs: Medical Affairs Operations • Global Commercial Strategy • Evidence Generation • Scientific Engagement • Healthcare Compliance • HCP/HCO Data

AI Technologies & Applications: LLM Integration • Agentic AI Systems • RAG Architectures • Machine Learning • Predictive Analytics • AI/ML Literacy

Governance & Compliance: AI Governance Frameworks • FDA Regulatory Compliance • Legal/HCC Review Coordination • Ethics in Healthcare AI • Validation Metrics • SOP Development

Project & Vendor Management: Project Planning & Execution • Timeline & Budget Management • Risk Mitigation • Vendor Evaluation • Procurement Workflows • Contract Management

Technical Foundations: Python • SQL • Snowflake • Databricks • OpenAI API • PyTorch • Data Platforms • Dashboard Development

Communication & Change Enablement: Executive Communication • Workshop Facilitation • Training Development • Stakeholder Negotiation • Digital Transformation Strategies • KPI Reporting

PRESENTATIONS & PUBLICATIONS

- CHPA Quality and Manufacturing Meeting (2025) — Solo Presenter: AI-driven regulatory intelligence and FDA enforcement trend analysis for pharmaceutical industry
- ISPE Annual Meeting & Expo (2025) — Solo Presenter: AI applications in FDA compliance and regulatory decision-making
- CHPA Regulatory, Scientific & Quality Conference (2025) — Solo Presenter: The Impact of AI on FDA-Regulated Industries - governance and compliance frameworks
- Redica Systems Webinar (2025) — Solo Presenter: From Reactive to Proactive: Leveraging AI/ML to Transform Quality Operations

PUBLICATIONS

- "Optimization and control of agent-based models in biology: a perspective" — Bulletin of Mathematical Biology, 2017
- "A computational model of invasive aspergillosis in the lung and the role of iron" — BMC Systems Biology, 2016