

Mark E. Riley

Washington, DC

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Languages & Aptitudes: Python, PySpark, Hugging Face, PyTorch, R, SQL, Spark, Tableau, GitHub, MS Office.

Data Science Skills: Natural language processing, machine learning, deep learning, statistics, regression, classification, unsupervised learning, prescriptive analytics, visualizations, forecasting, text mining, network analysis.

Education and Certifications

MS, Data Science | **University of Wisconsin – La Crosse**

Capstone Project: Applying Predictive Analytic Capabilities for CardioMEMS Patients

BBA, Information Systems Analysis & Design | **University of Wisconsin – Madison**

Project Management Professional (PMP) Certification | **Project Management Institute**

Publications

John C. Ruckdeschel, Mark Riley, Sriram Parsatharathy, Rajesh Chamarthi, Chakethraman Rajagopal, Hui Shuang Hsu, Doug Mangold, Chiny Driscoll. Unstructured Data Are Superior to Structured Data for Eliciting Quantitative Smoking History From the Electronic Health Record. JCO Clinical Cancer Informatics. 2023; no. 7 (2023) e2200155. PMID: 36809022 <https://ascopubs.org/doi/full/10.1200/CCI.22.00155>

Erin Hedglen, Maegan Paxton Willing, Mark Riley et al., Characterization of Obstructive Sleep Apnea in Active-Duty US Military Personnel Receiving Interdisciplinary Care at the National Intrepid Center of Excellence, Sleep, Volume 45, Issue Supplement_1, June 2022, Pages A274–A275, <https://doi.org/10.1093/sleep/zsac079.622>

Professional Experience

MetiStream, Inc. | Washington, DC

Lead Data Scientist | January 2022 – Present

- Lead the data science team efforts through work assignments, code reviews, providing mentorship, time sheet & PTO approvals, and semiannual performance reviews.
- Plan, execute, manage, and present results of customer implementation and pilot projects.
- Develop an NLP solution to extricate non-small cell lung cancer (NSCLC) patient treatment outcomes (response, progression, stable disease), immune-related adverse events (irAEs), and performance status (PS) to explore correlations between the data points.
- Match breast cancer and NSCLC patients to TAPUR Trials using NLP to extract cancer histology and biomarker testing results from physician notes.
- Create a lung cancer screening module that used NLP to extract patients' smoking status (active, former, never), quit period, pack-years, and lung cancer symptoms to identify candidates for lung cancer screening and diagnostic testing.
- Build a colorectal cancer (CRC) risk model that uses NLP and structured data to stratify patients into risk levels using colonoscopy results (polyp counts, types, sizes, locations, histology), symptoms, risk factors, and non-invasive test results (Cologuard, fecal immunochemical test)

- Develop deep learning NLP models using PyTorch and Hugging Face for sentence multi-class and multi-label classification of entities; generate performance measures – precision, recall, and F1.
- De-identify and annotate data for training deep learning models.
- Perform sales demonstrations of the MetiStream clinical insights platform, Ember.

The NorthTide Group | Washington, DC

Sr. Scientific Research Data Analyst | February 2021 – January 2022

- Generated datasets from IRB-approved protocol databases to support mild traumatic brain injury (mTBI) and psychological health (PH) research authorship teams.
- Created visualizations and perform statistical analyses, supervised, and unsupervised data science techniques on research datasets.
- Authored statistical approach sections of research manuscripts and grant proposals.

Cumberland Consulting Group | Nashville, TN

Senior Principal | May 2018 – Sep 2019

- Led an Epic EHR planning and budgeting project for both direct and connect/affiliate implementation options with the executive management team at Arnot Health in Elmira, NY.
- Worked with the CIO and CMIO to create an IT Steering Committee and Project Management Office including templates, workflows, and training at Hurley Medical Center in Flint, MI.
- Performed an EHR systems audit, HIT market overview, and developed recommendations for a strategic EHR roadmap for University Hospitals in Cleveland, OH.

Principal | Jul 2012 – May 2018

- Directed a team of consultants in the development of an implementation methodology for a custom-developed chronic care digiceutical health solution, as well as pilot implementations at two sites for EMD Serono in Rockland, MA (Merck KGaA Darmstadt, Germany).
- Led an Epic Connect pre-implementation planning project for an affiliate of the University of Rochester Medical Center in Rochester, NY.
- Developed a strategic plan and organization chart for Great Lakes Health System's two members, Kaleida Health and Erie County Medical Center Corporation in Buffalo, NY.
- Conducted a vendor evaluation and selection for revenue cycle management system replacement, including total implementation cost estimates for Jefferson Regional Medical Center in Pine Bluff, AR.
- Led a team in an IT assessment and strategic roadmap development project, followed by a fatal flaw enterprise EHR vendor evaluation and selection for St. Joseph's Healthcare System in Patterson, NJ.
- Directed the formation of an IT Steering Committee, developed a 12-month technology roadmap for IT initiatives, and oversaw a team of project managers leading five different key IT projects, four of which involved custom software development for PopHealthCare in Franklin, TN.
- Oversaw a vendor evaluation and selection project for home-based health assessments and care management workflows on the Salesforce platform for ComplexCare Solutions in NYC.
- Led a team to design, develop, test, and deploy a data extraction process from an ambulatory EHR system into an enterprise BI system for Eskenazi Health in Indianapolis, IN.

- Performed analysis for potential acquisition of a third-party ambulatory EHR and population health management system and prepared a formal report and recommendation for RegionalCare Hospital Partners in Brentwood, TN.

Executive Consultant | Jan 2008 – Jul 2012

- Directed teams of more than 20 analysts in multiple markets, bringing over 300 healthcare providers live on the eClinicalWorks EHR for HCA Physician Services in Brentwood, TN.
- Managed the implementation and go-live of Epic inpatient clinical documentation and electronic medication administration record (eMAR) systems at the University of Chicago Hospitals.

Managing Consultant | Apr 2005 – Dec 2007

- Completed the implementation of Allscripts TouchWorks clinical modules for the Department of Surgery at Washington University in St. Louis Faculty Practice Plan in St. Louis, MO.

Clarity Consulting | Chicago, IL

Consultant | Jun 2004 – Apr 2005

- Full-stack custom software developer using C#, MS SQL Server, and Sybase databases for Volkswagen Credit and Follett Higher Education Corporation.

Capgemini | Chicago, IL

Consultant/Senior Consultant | Aug 2001 – Jun 2004

- Database architect on IBM DB2, MS SQL Server, and Oracle 9i for clients including ConocoPhillips in Houston, TX and HCA in Nashville, TN.

About Me

Volunteering

- Scoutmaster, Troop 255, Potomac District, National Capital Area Council
- DC Central Kitchen, Kenilworth Aquatic Garden, Central Union Mission through the Wisconsin Alumni Association – Washington, DC Chapter (DC Badgers)