

Phil Callahan

Milwaukee, WI 53217 | 720.499.8020 | employphil@gmail.com | philsresume.com

Data Scientist

Senior data professional with 15+ years of industry experience in data-driven industries. Earned a Master of Science (MS) in data science (4.0 GPA) demonstrating proficiency with programming languages like Python, R, SQL, and Hadoop (HDFS) along with artificial intelligence (AI), Natural Language Processing (NLP), and machine learning (ML) methods like random forest, support vector machines (SVM), linear/logistic regression, decision trees, clustering, classification, sentiment analysis, etc.

In addition to development of data tools, have expertise with visualization software to display analytic results (Tableau, ggplot, etc.) – see philsresume.com and [portfolio](#) for examples. Lead projects, reported KPIs to global leadership, trained sites (600+ employees), and worked independently to mine cost-savings methods using available datasets.

- MS in Data Science (4.0 GPA)
- Informatics platform developer/admin
- Chromatography Data Systems (CDS) Admin
- Business Intelligence Admin
- Document Management Lead for Pharmaceutical Regulatory Inspection Prep Room (10+ inspections for FDA/EU/Customer)

Technical Summary

- **Languages/Libraries:** Python (pandas, numpy, pyomo, nltk, matplotlib, seaborn, math, circlify, etc.) R (tidyverse, dplyr, plotly, htmltools, shiny, etc.), MySQL, Hive, HTML, JavaScript, MDX, PHP, Pig, Scala, Spark, C++
- **Software:** AWS, Epic LIS, PowerBI, Tableau, SAP, Labware Laboratory Informatics System (LIMS), Trackwise (QMS), MS Excel, MS Word, SharePoint, MapReduce, HDFS, Hadoop, Empower Chromatography Data System (CDS)

Work History

CSols Inc., Newark, Delaware

Data Scientist

Oct 2022 – present

Provide analytical data science consulting services for life science companies including global pharmaceutical, local government, material manufacturing, etc. Additionally, tasked with building out new Data & Analytics department – designing and creating documentation, coding analytical tools (R statistical language, Python, etc.), and sales and marketing collateral ([blog articles](#), white papers, [webinars](#), etc.).

- Create data science [predictive](#) / [visualization](#) tools for life science clients using open-source languages R and Python.
- Created data visuals for white paper on artificial intelligence (AI) and machine learning (ML), created white paper on data visualization case study for manufacturing.
- Engineer generative AI prompts for marketing and sales collateral – Midjourney, Dall-e, ChatGPT, etc.

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Novartis Pharmaceutical, Broomfield, Colorado

Data Systems Analyst

Jan 2011 – Dec 2019

Administrator for laboratory informatics system (LIMS), harvested site quality control metrics for dashboarding, and drove process efficiency through business intelligence.

- Designed internal business intelligence SharePoint page to track Lab Service department analytics and discover trending of in-service instruments. Created real-time dashboard of results with PowerBI for site and global leadership monitoring and instrument decommissioning activities.
- Regularly mined data from informatics SQL database for efficiency and investigative work. Constructed ad-hoc SQL queries to site leadership specifications.
- Mined data from informatics SQL database to create regulatory annual report for all sections of analysis (water, environmental monitoring, and raw materials). Trend analysis required prescriptive and descriptive statistical reporting.
- Partnered with Microbiology Lab to convert Environmental Monitoring program from Access database to 21CFRPart11-compliant informatics module.
- Validated first Microsoft Excel spreadsheet in Sandoz North America for GMP use which eliminated five to ten hours of hand-calculations and clerical errors per week for chem lab.
- Avoided regulatory finding by migrating Stability results from legacy platform (ScienTek) to 21CFRPart11-compliant informatics system (LabWare).

TDK (Hutchinson Technology), Eau Claire, Wisconsin

Lab Manager

Aug 2005 – Aug 2008

Responsible for maintaining chemistry of proprietary machinery involved in the hard drive suspension making process (Developers, Etchers, Strippers, Gold/Nickel Plating Lines, Clean Lines, etc.)

Managed 4 - 6 direct reports (labor & absence, corrective action, etc.) GC, Auto-titrator, AA, CVS, ICP, UV-Vis, Anton Paar spec. grav., pH, conductivity, HAZWOPER certification, Scanning Electron Microscopy (SEM) - Hard Particle Analysis, GLP, ISO, PM's (preventative maint.), LIMS super-user, Lotus Notes, SOP / WI revision

Education

Master of Science – Data Science (GPA: 4.0), University of Wisconsin, Green Bay, Wisconsin

- [Foundations of Data Science](#)
- [Statistical Methods](#)
- [Programming for Data Science](#)

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- [Data Warehousing](#)
- [Big Data: High-Performance Computing](#)
- [Communicating About Data](#)
- [Data Mining & Machine Learning](#)
- [Visualization and Unstructured Data Analysis](#)
- [Ethics of Data Science](#)
- [Prescriptive Analytics](#)
- [Data Science and Strategic Decision-Making](#)
- [Capstone](#) – Operating Room Utilization Optimization at Children's Hospital Colorado

Bachelor of Science – Biology, University of Wisconsin – Eau Claire, Eau Claire, Wisconsin

Publications / Web Collateral

Modern Analytics Applied to Public Health; <https://www.csolsinc.com/blog/modern-analytics-applied-to-public-health/>

Five Ways Data Visualization Can Benefit Life Science Businesses, Today;
<https://www.csolsinc.com/insights/webinars/five-ways-data-visualization-can-benefit-life-science-businesses-today/>

Four Data Visualization Tools Applied to Life Sciences;
<https://www.csolsinc.com/blog/four-data-visualization-tools-applied-to-life-sciences/>

Mobile Image Ratiometry: A New Method for Instantaneous Analysis of Rapid Test Strips; [Nature Precedings : doi:10.1038/npre.2012.6827](https://doi.org/10.1038/npre.2012.6827)