

JOHN L. HELM, Ph.D.

Data Science Manager, Information Architect, and Analyst

CONTACT

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📍 Charlotte, NC.

🌐 [General Resume](#)

🌐 [LinkedIn profile](#)

SKILLS

- Data Analysis & Modeling/Mining
 - Exploratory Data Analysis
 - Classical & Bayesian Statistics
 - Logistic Substitution Analysis
 - Neural Networks & NLP
 - Data Visualization
- Scientific/Numerical Computing
- Monte Carlo Simulation
- Enterprise Data Integration/ETL
- Agile & Traditional Software Dev.
- IT Management (CTO, Dev., Eng.)
- Cloud Computing (AWS)

EDUCATION

Ph.D. Columbia University
Applied Physics NY, NY
1989

MS Columbia University
Nuclear Engineering NY, NY
1978

B.S. Columbia University
Chemical Engineering NY, NY
1977

Full employment experience and publications detailed at [here](#).

PROFILE

Accomplished Data Analysis and researcher with extensive experience performing Exploratory Data Analysis/Data Mining, Classical and Bayesian Statistics, Model Development, Monte Carlo methods and metrics development. Also competent at AI and ML. Highlights:

Distinguished Engineer & Technical Advisor - MongoDB

Chief Digital Officer - Sitehands.com

CTO and CO-Founder - OMNI Retail Group

CTO and VP of Engineering- IMPREV.COM

Head of Enterprise Architecture - Merrill Lynch

Chief Information Architect - Merrill Lynch

COO of Messaging and Collaboration Services - Merrill Lynch

Extensive Applied STEMs Experience

Modeling and Data Analysis Examples

- Instrumented end-to-end Process Mining for gig-economy IT Field Services platform. Optimized operations using Queuing Theory; created recommendation engine to automate worker-task matching (Sitehands).
- Designed and implemented shopper journey tracking system for behavioral analysis of online retail shoppers (OMNI Retail Group).
- Refactored and directly managed ETL and Data Warehouse as CTO of [Drugstore.com](#) to monetize the company's proprietary data and assure SOX 404 compliance.
- Developed "Measure and Match" for identifying the most apt project management approach based on measured delivery risk by fitting Weibull distributions to cycle time data. Open source publication: [summary here](#) and [full presentation here](#).
- Applied risk adjusted return analysis to (IT) project analysis; published as open-source [here](#). Conclusion: IT projects are usually riskier than B Grade, 10 year Junk Bonds (as of 2013).
- Designed and program managed a Process Mining infrastructure for analysis and compliance as Chief Information Architect at Merrill Lynch.
- Developed neutron fluence dose response function for predicting embrittlement of ferritic steel, results incorporated into NRC regulations for pressure vessel safety assessment. Project required data mining nuclear materials data repositories, Monte Carlo simulations; discrete ordinates numeral analysis; spectrum "unfolding" (using bayesian models), entropy maximization, and advanced statistics.

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AWARDS

Merrill Lynch CTO Award for an “outstanding track record of design innovation and delivery as well as espousing the company’s core values and mission.”

CIO Magazine “Resourceful 100 Award” (Aug 2003) for MLXchange, an Open Source auction site for United Way fundraising; and later server reuse, leading to \$500,000 of avoided cost through server reuse.

COMMUNITY

Seattle CTO Club
Co-Chair 2008 – 2020
The Seattle CTO Club is a peer group of technology managers

Mentoring
Northeastern University.
2023 – Present
MS in Technology Leadership

Columbia University
2015 – 2024
Executive Masters in Technology

Georgetown University
2021 – 2024
Executive MBA

INTERESTS

Kayaking, Backpacking, Hiking,
Photography, Cooking, Philosophy,
Theater

RECENT EXPERIENCE

INTERIM IT RISK OFFICER (as Consultant)

[CARDWORKS INC.](#) | CHARLOTTE, NC | Mar 2021 - April 2023 (2yr, 1 mo)

Developed operational metrics and visuals for KRIs aligned with IT-relevant risks mapped to enterprise risks. Also supported Enterprise Architecture and Information Security with metrics and systems analysis.

DISTINGUISHED ENGINEER and TECHNICAL OPERATIONS ADVISOR

[MONGODB INC.](#) | CHARLOTTE, NC | Mar 2021 - April 2023 (2yr, 1 mo)

Advisor to CTO. Performed enterprise architecture and cross-silo process analysis, assessment, and optimization.

CHIEF DIGITAL OFFICER (8 Mo) VP OF DATA & ANALYTICS (4 Mo)

[SITEHANDS, INC](#) | CHARLOTTE, NC | February - December, 2020 (11 Months)

Member of turnaround management team. As Chief Digital Officer, I was accountable for managing all technology activities. As Chief Data Officer, used Process Mining to identify and correct process bottlenecks and restored eroded margins. The company did not survive COVID-19.

CHIEF TECHNOLOGY OFFICER and CO-FOUNDER

[OMNI RETAIL GROUP, INC](#) | SEATTLE, WA | 2014 - 2018

Co-founder of a retail technology startup providing tools and data to optimize product delivery from seller to shopper. Responsible for all IT activities; Chief Data Scientist; performed product ideation, development and technology implementation.

CHIEF TECHNOLOGY OFFICER and VP OF ENGINEERING

[IMPREV.COM](#) | BELLEVUE, WA | 2007 - 2008

CHIEF TECHNOLOGY OFFICER

[DRUGSTORE.COM](#) | BELLEVUE, WA | 2005 - 2007

ADDITIONAL EXPERIENCE

MERRILL LYNCH | NY, NY | 1999 – 2003

- HEAD OF ENTERPRISE ARCHITECTURE, IDS TECHNOLOGY GROUP
- CHIEF INFORMATION ARCHITECT, ENTERPRISE DATA STANDARDS INITIATIVE
- VP OF RESEARCH AND DEVELOPMENT for MLX Portal implementation (B2B Web Portal)

PRINCIPAL

[JHELM ASSOCIATES, LLC](#) | REDMOND, WA | 2008 - Present

C-Level business and IT consulting with emphasis on executive advising, strategy and technology assessments, decision support, and metrics. Clients include: London Stock Exchange, Asurion, Rover, AT&T Wireless/Cingular.