

# JONATHAN W. LOWE

## SUMMARY

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Analytics strategist with 30 years of consulting experience. Envisions, sells, builds and manages fresh approaches to data-driven decision making for biopharma, agriculture, retail, supply chain and telecom clients. Unlocks value by bridging business and technical cultures. Thrives when growing new teams.

## EXPERIENCE

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- 2019-Present      PFIZER      Cambridge, Massachusetts
- Data Science Lead, Pfizer Global Supply – Digital Manufacturing*
- Use machine learning, network analysis and natural language processing to isolate root causes of volatility, predict batch release times, prescribe schedules and alert users to noteworthy trends
  - Boost release attainment from 17% in 2018 to 77% in 2019 at a top-10 manufacturing site
  - Optimize formulation plan for a major vaccine to release 12% more doses as previous year
  - In 5 years, grow team from 3 to 200 people with \$26M budget, expanding into R&D and Clinical
- 2013-2018      BOSTON CONSULTING GROUP      Boston, Massachusetts
- Principal Data Scientist, GAMMA (Co-founder, Operations lead)*
- Grow a new cohort from 10 to 500+ data scientists serving Fortune 1000 Operations clients
  - Lead technical launch of BCG's first firm-wide data visualization/analytics product on AWS
  - Aggressively go to market using creative video production and interactive web demonstrations
- 2011-2012      DELOITTE FINANCIAL ADVISORY SERVICES LLP      Washington, DC
- GeoAnalytics Manager, Federal Analytics Practice*
- Analyze disparate FCC datasets to identify regions of the US most in need of broadband roll-out
- 2008-2010      GISWEBSITE LLP      London, England
- Founder and owner of Spatio-temporal Systems Integration Consultancy*
- Integrate location data and analytics into Google/Metaweb's semantic web platform: Freebase
  - Overhaul the UK RPA's farm subsidy payment system in \$15mil project for 106,000 farmers
- 2001-2007      IBM      San Francisco, California & London, England
- Technical Lead for IBM's Global Business Consulting Services Division*
- Direct 15 developers to implement UK DEFRA portal for managing livestock, land and farmers
  - Modernize the USDA FSA's data, systems and business processes in a \$50mil, multi-year project
- 2000-2001      INFORMIX SOFTWARE, INC.      Oakland, California
- Worldwide Technical Pre-Sales Supporter and Evangelist for DataBlade Products*
- Designer and implementer of proof-of-concepts for location-aware, very large database contracts
- 1995-2000      LOCAL KNOWLEDGE CONSULTING      Berkeley, California
- Founder of geospatial data management and application development consultancy (12 direct reports)*
- Consultant & Project Manager for City of Oakland's GIS inception, development and launch
  - Publish 50+ articles demystifying technical industry trends in a 29,000-subscriber trade journal

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## EDUCATION

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HAVERFORD COLLEGE	Haverford, Pennsylvania
B.A., Geology (Metamorphic Petrology)	
HARVARD UNIVERSITY	Cambridge, Massachusetts
Harvard Graduate School of Design – Career Discovery in Architecture	
UNIVERSITY OF CALIFORNIA, BERKELEY	Berkeley, California
M.A. Landscape Architecture (dept. for Geographic Information Systems lab)	
UNIVERSITY OF CALIFORNIA BERKELEY EXTENSION	Berkeley, California
UNIX system administration; Programming in C, Visual Basic, and Java	
MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Cambridge, Massachusetts
Water and Sanitation in Developing Countries.	
WELLESLEY COLLEGE	Wellesley, Massachusetts
Introduction to Machine Organization – the hardware/software interface.	

## TECHNICAL SKILLS

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### Programming Language Experience:

Python Language (most frequently for ETL, graph data manipulation and optimization with PuLP).  
Database programming: Triggers/Procedures in PostgreSQL and Oracle databases including PL/R.  
Javascript (e.g. with D3 & CartoDB libraries) in Chrome, Firefox, Safari and Internet Explorer.  
Perl with modules such as CGI, DBI, graphics manipulation modules, LWP, and Regular Expressions.  
UNIX shell programming (korn shell, c shell, bourne shell) and system administration.  
Formerly expert in C, Visual Basic, Win32 API programming and Java at their peaks of fashion.

### Software and Database Experience:

Data analysis and visualization platforms: AIMMS, Alteryx, Carto, D3, HighCharts, R, and Tableau.  
Databases: Neo4j, PostgreSQL/PostGIS, Redshift, Snowflake, Oracle 11g, Informix, MySQL and DB2.  
Dynamic HTML and graphics generation on a variety of architectures and (open) software packages.  
GIS platforms: CartoDB, ESRI's ArcGIS 10.x (incl. Network Analyst), Quantum GIS and MapServer.

### Hardware and Operating Systems Experience:

Hardware platforms: AWS cloud computing (including Redshift), SUN, IBM, and HP/UX hardware.  
LINUX operating system: RedHat/Fedora Core, Ubuntu, FreeBSD and Gentoo.

## SAMPLING OF PUBLICATIONS (In *Geospatial Solutions Magazine*, 1999-2018)

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- Turning Visibility into Value in Digital Supply Chains (Jan 2018)
- A Geospatial Semantic Web (Jul 2005)
- Sizing Up the Mighty Mote (May 2004)
- Spatial Trends and Drivers in Insurance Loss Modeling (Feb 2004)
- Exploratory Spatial Data Analysis: Emerging tools and concepts (Jul 2003)
- Speaking of Weather for Spatial Decision Support (Mar 2003)
- The Anatomy of Web Map Services (Sep 2002)
- ASPs and Third World Labor (Jun 2001)

# JONATHAN W. LOWE

## SAMPLING OF PROJECTS AND CLIENTS

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- Biopharmaceutical clients (US, Confidential):
  - Build control towers to pinpoint and predict volatile manufacturing processes and stabilize plans.
- Coffee Producer client (US, Confidential):
  - Optimization of direct store delivery model unlocks \$8M in potential savings.
- Department of Defense's Military Health System (DoD MHS):
  - Align medical care from 350 hospitals and clinics to 9.6 million military beneficiaries' locations.
- Discount Variety Store client (US, Confidential):
  - Defer double-digit millions in network costs via post-acquisition shared DC capacity.
- Electric energy distribution network client (US, Confidential):
  - Automate design of primary conductor line expansion for joint funding negotiations.
- England's Rural Payments Agency (RPA):
  - Upgrade and integrate GIS and workflow systems for subsidy payments by land parcel hectareage.
- Federal Communications Commission (FCC):
  - Broadband data consolidation and analysis for 56 US States and Territories.
- Grocery Store Chain client (US, Confidential):
  - Footprint expansion based on shopping area catchment and demographic analysis.
- Middle Eastern Architecture & Engineering client (EMEA, Confidential):
  - Advise on geospatial market trends in 14 verticals and recommend growth strategies.
- National Broadband Network Company, Australia (NBN Co):
  - Strategic review of nationwide broadband technology roll-out identifying \$32bil in savings.
- Office supply delivery network optimization for merger integration plan (US, Confidential):
  - Quantification of over \$1mil per metro area cost savings from fleet routing efficiencies.
- Postal Supply Chain client (Scandinavia, Confidential):
  - Optimizing a national postal logistics supply chain and last-mile fleet exposed 37% cost savings.
- Telecommunications Repair and Maintenance client (Malaysia, Confidential):
  - Proved that over half of copper cable yards could be closed with no effect on coverage rate.
- U.K. Department for Environment, Food and Rural Affairs (DEFRA):
  - National Spatio-temporal Information Repository and multi-format data access point.
- U.S.D.A. Farm Service Agency (FSA):
  - Business Process Reorganization design with centralized data and processing of farm subsidies.
- Wireless Telecommunications client (US, Confidential):
  - Boost revenue by adjusting tower coverage to match locations of high-value customer segments.

## NOTEWORTHY CONFERENCE SPEAKING ENGAGEMENTS (2000-2017)

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- Neo4j GraphConnect Conference 2022 (Austin, TX)
  - Fireside chat about Pfizer with CEO Emil Eifrem during his main-stage keynote presentation.
- Gartner Data Analytics Summit 2017 (Grapevine, TX)
  - Presentation: "Solving for Where: Profitable Location Intelligence".
- BCG Telecommunications, Media and Technology Worldwide Practice Area meeting 2014 (Budapest)
  - Presentation: GeoAnalytic simulation of telecommunications technology roll-out.
- BCG Asia Pacific Functional Advantage Conference presenter 2014 (Hong Kong)
  - Presentation: GeoAnalytics – Look at the world differently with Meridian, today.
- BCG North America Functional Advantage Conference presenter 2013 (Chicago)
  - Presentation: Big Data Introduction – Advanced Analytics
- O'Reilly Where 2.0 Conference, presenter 2008 (Burlingame, CA)
  - Mainstage presentation on semantic database applications using Metaweb's Freebase.
- Stanford Business School, presenter 2003 (Stanford University, CA)
  - Presentation: Market trends in spatial information management.
- ESRI Business Partners Conference, presenter 2002 (Palm Springs, CA)
  - Presentation: Tuning and configuring ArcSDE for IBM's DB2 and Informix databases.