



Jonathan Fowler, D.C.Sc.

FOUNDER, CEO, AND TECHNICAL LEAD

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Summary

Dr. Fowler is a practitioner and scholar in big data analytics, data culture, and data strategy. Specifically interested in the relationship of data culture archetypes to analytics maturity in organizations, as well as data analytics as an instrument of power in culture and society. Creator of the LDIS+™ Analytics Impact Framework, which examines data culture archetypes and gives companies the roadmap to harnessing them for business analytics success.

Education

Colorado Technical University

DOCTOR OF COMPUTER SCIENCE, BIG DATA ANALYTICS

Colorado Springs, CO

February 2022

- **Dissertation:** Examining the Relationship between Occupational Culture and Data Analytics Maturity: A Quantitative Correlational Study

Clemson University

MASTER OF EDUCATION +30

Clemson, SC

May 2007

Clemson University

BACHELOR OF ARTS IN ENGLISH

Clemson, SC

Dec 2004

Experience

Logicle Analytics

FOUNDER, CEO, AND LEAD DEVELOPER

Greenville, SC

Aug 2020 - Present

- A growing data+analytics consultancy based on my doctoral research
- Focus on data integration, data governance and consistency, and migrating from cumbersome legacy applications
- Major projects listed below

Moda Operandi

LEAD DATA STRATEGIST

New York, NY

Oct 2020 - Present

- Responsible for analytics and data strategy within the organization
- Primary Looker developer and administrator
- Developed company-wide Data Governance Board including department heads to tackle data definitions, KPIs, and master data management

Pedestal Technology

VP OF DATA SCIENCE, PRIMARY BI DEVELOPER

Greenville, SC

May 2018 - Oct 2020

- Responsible for analytics and data strategy both internal and customer-facing since inception of company
- Developed a comprehensive data environment/culture assessment through my doctoral studies that highlighted data analytics and reporting needs, pinpointed priorities and challenges, and set up a proposed way forward aligned with best practices
- Collaborated with Pedestal sales team on all data-related Statements of Work
- Implemented Agile methodology and tools for my analytics team, including Sprints, Projects, Epics, Stories, Tasks, and Capacity Planning
- Utilized Azure infrastructure to scale original small projects into a repeatable profit centers for company, including the evaluation of Actian Avalanche for integration as a third-party ETL and warehousing provider
- Worked with external software vendors, customer business users and SMEs, and internal staff to determine most appropriate data-centric solution for client based on my proprietary business intelligence maturity assessment
- Major projects below

Fowler Consulting LLC

PRINCIPAL

- A single-member LLC to hold all my contract projects and teaching assignments
- Established immediately after finishing my MEd so that I can properly bill for contracts
- Proper vehicle for 1099, C2C business relationships
- See projects below

Greenville, SC

Oct 2007 - Present

New York Life Insurance Co

REGISTERED REPRESENTATIVE

- Shared expertise in financial risk and planning concepts
- Developed individual insurance and financial solutions for clients based on in-depth interviews and analyses
- Mentored new recruits and partnered with agents for comprehensive cases
- Built analytics and practice management methods for efficiency

Greenville, SC

Dec 2011 - Jul 2015

School District of Oconee County

SCHOOL COUNSELOR

- Elementary (PK-5) and career center (10-12) counselor

Walhalla, SC

May 2007 - Dec 2011

Skills

Languages and Environments	R, RStudio, Shiny, Python, SPSS, SAS, Shell, COBOL, ASP, VB.NET, C#
Databases	Microsoft SQL, SSIS, MySQL, Oracle, InfluxDB, PostgreSQL, NoSQL variants
Visualization and Reporting	Tableau, IBM Cognos, Power BI, Looker, SSRS, JasperSoft, Metabase
Cloud	AWS, Azure, Linode, Oracle, Google
Machine Learning Algorithms	Regression, Decision Tree, Random Forest, SVM, kNN, Bayesian
R Packages	dplyr, devtools, ggplot2, RMySQL, RODBC, tidyr
Python Libraries	Pandas, NumPy, TensorFlow, Scikit-Learn, Keras, PyTorch
Version Control	Git, TFS
SDLC and Project Management	Agile, Waterfall
Teaching	Bootcamps and masters-level courses in data science and BI
Domain Experience	Finance, Manufacturing, CPG, Medical, Retail, Education, Legal

Publications

- Fowler, J. K. (2022). Don't gloss over data culture. Web Page. Retrieved from <https://towardsdatascience.com/dont-gloss-over-data-culture-1a05b48dc2de>
- Fowler, J. K. & Amirian, S. (2021). Integrated plant growth and disease monitoring with IoT and deep learning technology. In *Transactions on Computational Science and Computational Intelligence: Advances in Data Science and Information Engineering* (pp. 389–394). Springer.
- Fowler, J. K. (2019a). A competing values approach to business intelligence. In R. Stahlbock, G. M. Weiss, & M. Abou-Nasr (Eds.), *International Conference on Data Science, ICDATA'19* (pp. 46–49). CSREA Press.
- Fowler, J. K. (2019b). Business intelligence at the university. In H. R. Arabnia, L. Deligiannidis, F. G. Tinetti, & Q.-N. Tran (Eds.), *International Conference on Computational Science and Computational Intelligence, CSCI'19* (pp. 821–825). IEEE Computer Society.
- Fowler, J. K. (2018a). Adopting a data-centric culture. Web Page. Retrieved from <https://tdwi.org/articles/2018/04/06/biz-all-adopting-a-data-centric-culture-3.aspx>
- Fowler, J. K. (2018b). The ABCs of a data-centric culture. Web Page. Retrieved from <https://tdwi.org/articles/2018/04/03/biz-all-abcs-of-data-centric-culture-2.aspx>
- Fowler, J. K. (2018c). Why BI isn't a technology issue. Web Page. Retrieved from <https://tdwi.org/articles/2018/04/02/BIZ-ALL-BI-Isnt-Tech-Issue-1.aspx>

Fowler, J. K. (2006). A problem of biography: Plath, Hughes, the glass crypt, and the infinite moment. In T. R. Smith (Ed.), *Lifewriting annual: biographical and autobiographical studies* (Vol. 1, pp. 109–121). New York: AMS Press.

Projects and Engagements

Data Integration Build, Wealth Advisor Firm

- Tools used: Python, REST API, SQL Server, SSIS, SSRS, Power BI, Azure
- Worked with data stakeholders across company to understand priorities, challenges, and ways forward
- Created new data warehouse environment, master data management, and necessary ETL for an integrated reporting solution

Access Database Migration and Inventory Pipeline, Media Buying Agency

- Tools used: MS Access, SQL Server, R, Azure Data Factory, Python
- Migrated a legacy Access database to a SQL Server backend (Azure) and ASP.NET front end
- Automated the ingestion process for inventory availability and planning, eliminating hours of manual work
- Interfaced with QuickBooks Online via ODBC wrapper to upload/download customers, vendors, invoices, and bills

Data Integration Build, Private Equity Firm

- Tools used: Python, REST API, SQL Server, SSIS, SSRS, Power BI, Azure
- Worked with data stakeholders across all company locations to understand priorities, challenges, and ways forward
- Created new data warehouse environment, master data management, and necessary ETL

Master Data and Reporting Upgrade, Large CPG Manufacturer

- Tools used: SQL Server, IBM DB2, SSIS, SSRS, Power BI, IBM Cognos
- Worked with data stakeholders across all company locations to understand priorities, challenges, and ways forward
- Created new data warehouse environment, master data management, and necessary ETL
- Facilitated new data governance board for company, bringing various stakeholders together for the first time
- Coached the business stakeholders on master data management, data definitions, and KPIs.
- Worked with parent company to transition data environment to SAP

Marketing Pipeline, Automotive B2B Vendor

- Tools used: sFTP, Python, Azure Data Warehouse, REST API
- New lead records from regional automotive dealers processed nightly via Python
- Records pushed to Azure Data Warehouse
- Web front-end allows for campaign creation, modification, and mailing

IT Business Analyst, Bank of America

- Served as business liaison and developer for SAS-driven regulatory group capacity planning tool
- Engaged Lines of Business (LOB) to understand business problems, identify underlying needs, and ensure alignment with development teams
- Drafted and maintained business requirements, aligning them with functional and technical requirements
- Validated design with stakeholders to ensure requirements were met
- Evaluated risks related to requirements implementation, testing processes, communications, and training
- Created and maintained project documentation for both internal and external users

Data Science Bootcamp Instructor, QuickStart Technologies

- Topics covered include SQL, Power BI, R, Python, and Tableau
- Responsible for curriculum development and delivery
- Created and evaluated student projects covering all primary topics
- Set up necessary lab environments from scratch (SQL, Power BI, R, Python, and Tableau)

Business Intelligence Instructor, Brandeis University GPS

- Topics covered include BI Capabilities, BI Technologies, Information Integration, Analytic Insights and Decision Making, Stakeholder Presentations, BI Tools, BI Management, and Future of BI
- Overall 4 out of 5 rating from students

Integrated Plant Growth and Disease Monitoring, Agricultural IoT Startup

- Tools used: Linode, Linux VM, Particle.io, Python, InfluxDB, Grafana, Keras
- Sensor package on each plant sends data through Particle.io
- Data is streamed to an InfluxDB instance on a Linux VM
- Grafana displays data from InfluxDB and sends alerts for critical levels of moisture, temperature, and light
- Drone imagery is fed to NoSQL database and processed via Keras for leaf anomalies
- Anomalous images are matched with sensor readings to understand preceding events

Hadoop and Spark Proof-of-Concept

- Tools used: Linode, Linux VM, Hadoop, MapReduce, Spark, Python (PySpark), Twitter API, Flask, Zabbix
- Built two-node Hadoop cluster and hardened to prevent malicious attacks
- Added Spark to cluster and monitored with Zabbix
- Built Twitter ingestion app to examine trends in various locations in the US

Analytics Engine, Medical Office

- Tools used: Linode, Linux VM, SQL Server, Python, MySQL, and Metabase
- Designed and deployed a full-stack analytics solution for patient, provider, and payor metrics
- Maintained infrastructure on Linode cloud
- Worked with office manager and providers to understand necessary metrics and reporting needs; these included patient and case ROI, referral ROI, seasonality, insurance company performance, and provider efficiency
- Utilized existing data to predict patient no-shows and cancellations with accuracy consistently above 80 percent

Survey and Analytics Build, Law Firm

- Tools used: AWS, Linux VM, LimeSurvey, MySQL, R
- Planned and executed the longitudinal study design, instrumentation, data warehousing, and front-end reporting of analytics for both sentiment analysis and potential juror selection in the Mandalay Bay liability matter after the Route 91 shooting
- Utilized statistical matching (or Doppelganger Discovery) to find appropriate stand-ins for a shadow jury in a civil trial

Cisco UC Call and Network Analytics, VOIP Provider

- Tools used: SQL Server, SSRS, Power BI, R
- Produced call metrics, load reports, and hunt group efficiencies
- Introduced network edge graphing to understand how intra-office communication happens in real time

Performance and Warehouse Analytics, B2B Vendor

- Tools used: SQL Server, SSRS, Power BI, R, 3PL, Shell Scripting, REST API
- Implemented data integration and workflow optimization for associate reward program of a cosmetics manufacturer
- Added predictive modeling to incentive tracking and order fulfillment workflow
- Designed and implemented new data architecture for warehouse management to ensure automation of processes and scalability based on stakeholder input

HR Analytics, Aerospace Manufacturer

- Tools used: SAP, SAS, R
- Designed an attrition risk model based on data available in SAP
- Deployed a recurring report to highlight the employees within the company most likely to leave within the next 12 months based on predictive model

Project Scoring Model and Public Portal, State DOT

- Tools used: SQL Server, SSRS, Power BI
- Developed, and deployed proof-of-concept for state DOT online dashboard to report highway projects and funding priorities for public transparency
- Presented POC to stakeholders at agency and led transition of data team after a new vendor was brought in

Predictive Modeling for Critical System Failures, Managed IT Provider

- Tools used: Azure Data Warehouse, Azure Data Factory, R, Python, Shiny
- Served as advisor to student group in this capstone project
- Assisted students in developing and testing various predictive models for critical failures

Assorted Access builds and mainframe conversions, Hospital

- Tools used: Access, SQL Server, DB2, VSAM
- Built business-specific Access databases for various hospital departments that interfaced with SQL Server
- Helped convert legacy VSAM and DB2 databases to SQL Server

Flight Tracking, Personal

- Tools used: Raspberry Pi, FlightAware, R, Python, ADS-B antenna
- Built an ADS-B receiver to track air traffic around my home
- Set up dashboard using Raspberry Pi software (SkyAware) to see traffic and weather real-time
- Utilized FlightAware database and scraped major airline route schedules to determine best routes that would allow me to fly on specific aircraft, e.g., Boeing 787 or Airbus A330