

**STEPHANIE HAMILTON, PH.D.**  
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## PROFILE

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Data Science and Operations professional with programming, data analysis, statistics, six sigma, operational excellence, manufacturing, and process validation experience. Drive innovative solutions enhancing quality, performance and sustainability with data and collaborative cross-functional teams.

## SKILLS

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### Data Science

- Completed 16 edX courses to date in Data Science, September 2023 – Present with support of Verizon.
- Learned and utilized SQL to create reports and improve Production Planning team efficiency by 15%.
- Growing data analysis skills in R and Python programming, Power BI, and Tableau.
- Trained in SQL and Fortran programming.
- Extracted data from Siemens MES and Aspen Process Explorer reporting systems.
- Cleaned, analyzed and visualized process data using Minitab, Microsoft Excel & Power BI to evaluate process data and make process decisions to improve product quality and process performance.
- Analyzed data of new product, identifying critical process parameter impacting product quality.
- Designed and analyzed qualitative surveys which led to shift-change downtime reduction.
- Published research and data analysis with six peer-reviewed publications.

### Engineering

- 8 years pharmaceutical industry manufacturing plus support of medical grade fiber production.
- Improved key product process, gaining 20% A-grade product yield improvement.
- Identified equipment reliability issues, spearheading timely equipment replacements.
- Member of new fiber product development team, with contributions including recipe improvements, production team engagement, and process monitoring for the newest ballistic fiber which allows customers to reduce their ballistic product weight by 10-20%.

### Operational Excellence

- Led DSM Integral Continuous Improvement (DICI) Initiatives, working with Fiber Production floor.
- Designed and led team to implement an automated 10% batch changeover-time-reduction, achieving sustainable \$420,000+ annual gain.
- Conducted risk analysis, root cause analysis and kaizen events to identify/prioritize improvements.
- Earned DSM Six Sigma Greenbelt (2016) & invited as American Society of Quality speaker (2014).

## PROFESSIONAL EXPERIENCE

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### **DSM Dyneema/Avient; Greenville, NC**

**May 2012-August 2023**

*Senior Site Process Engineer.* Leveraged data analysis to inform strategic decision-making. Dedicated to the team and processes around the clock, including on-site during the COVID era. Focused on leading & delivering optimal support to production personnel, sharing information that fostered mutual growth and contributed to the achievement of our collective goals. Drove daily production operations of ballistic fiber lines, establishing startup & recipes, monitoring process parameters, product quality, as well as equipment and instrument performance. Daily cleaned large data sets, analyzed, visualized and reported.

**East Carolina University; Greenville, NC****2006-2012**

*Teaching Instructor, Department of Engineering.* While working on Ph.D. at North Carolina State University, developed and taught courses in both engineering and industrial systems departments. Courses included Quality Engineering, Project Management, MatLab/Excel and Statistics. Developed bioprocess courses including co-investigator on NSF grant and supported ABET accreditation. Organized Leadership Lecture series with military, industry & academic leaders. Acquired biomaterials laboratory equipment, providing requirements to vendors, managing budget and installation to completion.

**Merck Manufacturing Division; Wilson, NC****1998-2006**

*Production Planner (2004-2006).* Coordinated solid dosage form pharmaceutical packaging. Earned APICS CPIM (Certified in Planning and Inventory Management) certification. Took initiative to learn SQL.

*Quality Assurance Coordinator (2002-2004).* Supported annual product review documentation, process excursion investigations, product validation as well as regulatory and supplier quality audits.

*Engineer/Scientist (1998-2002).* Supported technology transfer, daily production and new product qualification, validation launch of solid dosage form (tablet) products. Prepared qualifications as well as product and process validation plans. Responsible for data analysis and monitoring of product sampling, equipment performance and working with Production, Maintenance and Quality personnel to investigate production issues, utilizing Microsoft Excel and Microsoft Access.

**EDUCATION**

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[Professional Certificate in Data Analysis for Decision-Making](#), RITx, edX, 2024

**edX Curriculum completed to date in Data Science, September 2023 – present:**

RITx:	<a href="#">Professional Certificate in Data Analysis for Decision-Making</a> , 2024JAN
	<a href="#">DATA103x: Data Representation and Visualization in Tableau</a> , 2024JAN
	<a href="#">DATA102x: Data Processing and Analysis with Excel</a> , 2024JAN
	<a href="#">DATA101x: Data Foundations</a> , 2024JAN
HarvardX:	<a href="#">PH125.8x: Data Science: Machine Learning</a> , 2024MAR
	<a href="#">PH125.7x: Data Science: Linear Regression</a> , 2024FEB
	<a href="#">PH125.6x: Data Science: Wrangling</a> , 2024JAN
	<a href="#">PH125.5x: Data Science: Productivity Tools</a> , 2023DEC
	<a href="#">PH125.4x: Data Science: Inference &amp; Modeling</a> , 2023DEC
	<a href="#">PH125.3x: Data Science: Probability</a> , 2023NOV
	<a href="#">PH125.2x: Data Science: Visualization</a> , 2023NOV
	<a href="#">PH125.1x: Data Science: R Basics</a> , 2023OCT
UMarylandX:	<a href="#">FC1x: Fat Chance: Probability from the Ground Up</a> , 2023OCT
	<a href="#">ENES608.4: Data Science and Agile Systems for Product Management</a> , 2024JAN
UWashingtonX:	<a href="#">CYB003x: Building a Cybersecurity Toolkit</a> , 2023DEC
	<a href="#">CYB001x: Introduction to Cybersecurity</a> , 2023NOV
DavidsonX:	<a href="#">D006: Essentials of Data Literacy</a> , 2023OCT

[Ph.D.](#) in Biomolecular & Chemical Engineering; North Carolina State University; Raleigh, NC, 2011

[M.S.](#) in Chemical Engineering; North Carolina State University; Raleigh, NC

[B.S.](#) in Mechanical Engineering; University of Notre Dame; Notre Dame, IN

**CERTIFICATIONS**

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Six Sigma Green Belt Certification (corporate), DSM, 2016