

# MICHAEL DEWITT

Winston Salem, NC

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## EXPERIENCE

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### **Wake Forest University**

*Data Scientist*

October 2017 - Present

*Winston Salem, NC*

- Working in the Office of Institutional Research perform descriptive, predictive, and proscriptive analysis on a variety of topics from student outcomes analysis to student retention prediction.
- Completed a predictive student retention risk model that highlights each student's risk of leaving the university using statistical machine learning techniques.
- Crafted an "early warning" report to provide to the Office of Academic Affairs with students who are in a high risk category for early intervention based on data insights.
- Conduct training on statistical topics and data visualization techniques as part of the University wide "Business Intelligence and Analytics" team.
- Created an automatic data collection tool that combines various data from around campus and open source information into a centralised data store for further analysis.
- Conduct survey analysis on university wide surveys which includes postrification and MRP.
- Serve as an internal consultant for programming and R related issues including developing an R package to facilitate analysis and report writing.
- Provide ad hoc analysis and reporting to administration as needed.

### **Michelin North America**

*Central Industrial Engineer*

May 2013 - October 2017

*Greenville, SC*

- Document and facilitate best practice sharing among all North American facilities and international locations. Coach plant staff and industrial engineers in the 10 manufacturing facilities.
- Identified and led prototype project to reduce the need to invest in new equipment through low cost machine modifications resulting in the savings of 2.3 million dollars.
- Used Monte Carlo simulation techniques in R to demonstrate a machine automation change could avoid 2 million dollars in losses per year.
- Developed an R package and Shiny App to model impact of new tire lines on industrial results.
- Developed an optimization algorithm which led to the development of a patented process.
- Applied operations research principles to maximize consumption of reworked material.
- Provide studies and impact analysis on new product evolutions including capacity, value stream mapping, sensitivity analysis, flow and storage impact including recommendation of new processing equipment to the global steering team.
- Lead the Best Practice Sharing Network which identifies and documents best practices and shares them with the different manufacturing facilities.
- Viewed as a reference on information systems, data visualization, analysis and business intelligence for manufacturing. Includes working to start a data science for manufacturing team and providing training to users on tools, analysis, and statistics.

### **Michelin North America**

*Industrial Engineer*

May 2010 - May 2013

*Columbia, SC*

- Continuous Improvement Engineer for a shop of 163 operations employees, 15 maintenance technicians and 24 contractors in 4 separate business units with 22 individual machines. Responsible for determining capacities, staffing, guiding continuous improvement efforts and leading the annual business planning process.

- Implemented a plant-wide automated kanban system from curing through assembly and extrusion to create a pull system to the plant bottleneck.
- Developed dashboards and analysis tools to support use of the kanban tool company-wide.
- Developed a loading model using existing information systems that provides an eight week forecast (previously 1 week) of demand for the preparation shop allowing for capacity and flexibility planning.
- Facilitated and led multiple kaizen events to improve productivity in the workshop.

### **Michelin North America**

May 2007 - Aug 2009

*Continuous Improvement Intern*

*Columbia, SC*

- Planned and facilitated four one week 5S organization events for cross functional teams of 10-12 people from various disciplines.
- Created plant-wide safety indicator, tracking system, and automated report generation, resulting in the current plant safety reporting system. Included development of 2 year deployment road map for 5S program.
- Two Summers as continuous improvement intern, implementing Michelins Continuous Improvement System.

## **EDUCATION**

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### **Clemson University**

*2006-2010*

B.S. in Chemical Engineering

Minor in Philosophy

Overall GPA: 3.30

### **North Carolina State University**

*2015-2017*

Post Baccurelauret Studies

Operations Research, Industrial Engineering, Statistics

Overall GPA: 3.60

### **North Carolina State University**

*August 2017 - Current*

Masters in Statistics

Certificate in Data Science Foundations

## **QUALIFICATIONS AND TRAINING**

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### **Certifications**

Engineer in Training #19393

Lean Six Sigma Greenbelt Clemson Center for Excellence in Quality

CITI Human Research for Social Sciences

### **Additional Training**

Positive Management Leadership

Situational Leadership

AT Kearny's Lean Program

## **TECHNICAL STRENGTHS**

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### **Languages**

Expert: R, SAS,  $\LaTeX$ , Markdown

Intermediate: French, Spanish, SQL, JAGS, Python, git, LINDO, VBA

### **Visualization**

MS Power BI, Microstrategies, Tableau, ggplot2

### **Certifications**

Engineer in Training