NIKHIL AGARWAL

DATA SCIENTIST

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SKILLS

Methods
- App/web analytics
- Market basket analysis
- Machine learning

Packages
- ggplot, dplyr, ranger, caret, h2o, xgboost, shiny
- pandas, seaborn, numpy, sklearn, matplotlib

Languages/Software
- R, Python
- Tableau, Databricks

EDUCATION

MS Data Science
Northwestern University
Evanston, IL
2015-2018

BS Industrial Engineering
Northern Illinois University
DeKalb, IL
2006-2008

ACHIEVEMENTS

- 2018 John Deere Ag & Turf President's Award Winner
- IIE-published research paper: A Case Study on the Facility Location Problem for a Large-Scale Emergency Service

PROFILE

Knowledgeable **Data Scientist** with over 11 years of experience in the agriculture industry and strength in analyzing and utilizing data to support decision-making. Record of success includes leveraging data and statistical models to save analysis/process time, assist in identification of best practices and equipment, and expedite reporting. Able to distill complex results and concepts into accessible information for non-technical teams. Able to effectively utilize large databases and data sets.

PROFESSIONAL EXPERIENCE

John Deere | Data Scientist (multiple teams) | September 2015 - Present

- Developed a new model to classify level of digital solution engagement by customer. Resulted in a reclassification of over 60% of users and enabled marketing teams to better understand customers' disconnect with solutions offered by Deere.
- Developed and led training workshops with product owners and dev teams to think about analytic needs within a business context. Resulted in reduced iterations for analytics and improved relations between product teams and data scientists.
- Developed descriptive text analytics to help compare John Deere digital solutions to comparable solutions from competitors and non-competitors. This was accomplished with sentiment analysis using social media and customer feedback.
- Developed a clickstream model to describe customer behavior while navigating John Deere digital solutions and used hierarchical agglomerative clustering to segment customers
- Developed R package that combines data from several sources to determine last known location of any John Deere machine and the closest servicing dealer
- Designed Shiny application to summarize specific dealers' parts/labor revenues by specific work orders and job types, as well as provide an easy-to-understand summary for non-technical users.
- Conducted text analytics (with pairwise correlations) on dealer work orders and developed Shiny application to identify prospective ExpertJobs (pre-defined tasks to help dealers deliver a more consistent invoice to customers and standardized work instructions)
- Developed Shiny application that enables users to correlate machine error codes with repaired/replaced part numbers by cross-referencing dealer work orders and factory solutions; tool also enables users to identify ExpertAlerts (proactive alerts sent to dealers for machines that will experience unscheduled downtime) for any product line. Resulted in a savings of 35 minutes (average) required to correlate part number to error code.
- Analyzed fuel usage of 2,000+ customers worldwide; used statistical sampling to model customer machine behavior and machine usage. Findings resulted in engineering teams designing 'expandable' fuel tanks vs. one larger tank.

John Deere | Industrial Engineer (multiple teams) | June 2008 - September 2015

- Supervised third-shift operations of five employees as the only John Deere representative on-site at the Miami facility in the absence of the facility manager.
- Analyzed pick trip and load building data and recommended system modifications that reduced overfills by almost 80% and drove projected labor time savings of 12+ minutes per employee per day.
- Developed parameters for pick-trip building software by using AutoCAD to reduce non-value added travel time by average of 10% resulting in projected labor savings of more than $20,000 per quarter.
- Identified and reduced NVA assembly work content (through process audits) by 35% resulting in projected savings of $300,000 per year.
- Reduced assembly process inefficiencies by 25% (combination of body travel analysis and work bench placement analysis) resulting in projected operational savings of $100,000 annually